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STANFORD UNIVERSITY LIBRARY

THE
QUARTERLY JOURNAL
OF
ECONOMICS

VOLUME XX

PUBLISHED FOR HARVARD UNIVERSITY

BOSTON
GEO. H. ELLIS CO., 272 CONGRESS STREET
1906

397980

Y9A961 09013472

GEO. H. ELLIS CO., PRINTERS, 273 CONGRESS ST., BOSTON

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THE
QUARTERLY JOURNAL
OF
ECONOMICS

NOVEMBER, 1905

THE ENGLISH RAILWAY AND CANAL COM-
MISSION OF 1888.

I.

WHILE the law providing for the Commission of 1873 passed both Houses of Parliament with comparative ease, and received but little opposition from the railway interest, the law of 1888 developed by small degrees, and met much opposition. The report of the Committee of 1881 had stated that a permanent railway tribunal was necessary.¹ Railway Commission legislation was introduced regularly between 1882 and 1886. In 1885 the nine principal railways submitted bills to Parliament embodying a general classification and a rearrangement of their maximum rates. But the protests of the traders led to the withdrawal of these measures. The defeat of the government in 1886 on the Irish Question prevented any further action at that time. In 1887 a regulative measure, which in some respects resembled the legislation of the following year, passed the House of Lords.

¹ *Report of Select Committee on Railways, 1881, Part I., p. lii.*

So far as the form of the Commission is concerned, the most important changes introduced by the legislation of 1888 were the court organization of the Commission and the limitation of the right of appeal. Under the old organization the Commission was considered to be in the same position as any inferior court, and might be prohibited from proceeding in matters over which it had no jurisdiction.¹ Now, by giving the Commission a definite court organization and by making its decisions final on questions of fact, much strength was added.

The new legislation provided for a Commission of five members, composed of two lay and three *ex-officio* members. The *ex-officio* members are superior court judges, one for England, one for Scotland, one for Ireland. The active Commission at any one time has a membership of three, the two lay commissioners presided over by the designated superior court judge of the country in which the Commission is sitting.² While the judges who serve on the Commission are appointed for terms of five years, the lay commissioners hold office on a good-conduct tenure. The old provision whereby one of the lay commissioners was to be "of experience in railway business" was continued; and Mr. Price, the railway member of the former Commission, was reappointed. The qualification of the other lay commissioner was not specified. To this position Sir Frederick Peel, whose training was legal and who had been a member of the Railway Commission in 1873, was appointed. The lay commissioners were admonished of their judicial functions, for in their letters of appointment they were informed, "Doubtless you will feel that the judicial nature of your office is also incompatible with any active engagement in political controversies."

¹ *Toomer v. L. C. D. Ry. Co. and S. E. Ry. Co.*, 3 Ry. and Canal Traffic Cases, 98.

² The draft legislation of 1887 had provided a cumbrous arrangement whereby the judicial commissioner was to preside when a question of law was involved, while in other matters his attendance was to be invited by the lay commissioners, "if it was expedient for the better performance of the Commission's duties."

While the jurisdiction given by the Act of 1888 embraces a variety of functions, the most important of which are undue preference, facilities for traffic, traffic on steamboats, through rates, rate-books, terminals, legality of rates, provisions relating to private branch sidings, and references under the Board of Trade Arbitrations Act, 1874, the most important matters from the standpoint of the traders are (a) terminals, (b) reasonable facilities, (c) through rates, (d) undue preference, (e) control over actual rates.

The history of the terminal question is a long and involved one. When the earlier railways were chartered, the "canal toll" idea prevailed. For a time carriers, already in existence, quoted through rates over the railway lines, making such arrangements as they deemed proper in regard to payments for special services and for station terminals. It was not long, however, before the railways controlled the forwarding business, and complaint soon arose. The railways claimed the right, in addition to the powers given them under their maximum rates, to make charges for additional services and for terminals.¹ The traders contended that the maximum rates covered all that the railways were legally empowered to collect. It was concerning the station terminals, however, that the keenest contention existed. The Select Committee of 1882 had recommended that terminal charges should be recognized, but that they should be subject to publication by the companies, and that in case of challenge they should be sanctioned by the Railway Commission.² A clause to this effect was contained in the regulative measure introduced by Mr. Chamberlain in 1884. In a decision of the Court of Queen's Bench

¹ The question of terminals has come up in the United States. The charter of the Pittsburgh & Connellsville Railway gave it the right to charge tolls. It was decided it had the right to charge terminals as well. *National Tube Works v. Baltimore & Ohio R.R.* (Penna.), 28 Am. and Eng. R'd. Cases, 13.

² *Select Committee on Railways*, 1882, pp. v and xvii.

in 1885 the right of the railways to collect terminals was definitely recognized.¹ But the traders did not recognize this decision as final; for, because of a technical condition, it was impossible to carry the case before the higher courts. While the legislation of 1888 was in committee, various attempts were made to place the control of terminals under the Railway Commission, as well as to provide that in every case the maximum rates should include terminals. But the government took the position that terminals were legally established, and so they were given explicit recognition.

The power to order through rates, on application, which had been placed in the Act of 1873 as an extension of the facilities clause of the Act of 1854, had authorized the Commission to act only when application was made by a railway or by a canal company. The Act of 1888 extended this jurisdiction by empowering the Commission to receive an application from a trader as well.

In every possible way the fact was emphasized that the Commission was a court, and therefore not concerned with rate-making. The control of matters pertaining to rates was divided. Powers in regard to conciliation of rate difficulties were given to the Board of Trade. When the provision placing the revision of maxima and of classification in the hands of the Board of Trade was under consideration, an amendment to place such revision in the hands of the Commission was negatived.

The Act of 1888, while it repealed portions of the railway regulative acts already in existence, did not codify

¹*Hall v. London, Brighton, & South Coast Railway*, 15 Q. B. D. 505. This overruled a decision of the Railway Commission. A discussion of the question from the traders' standpoint will be found in Hunter, *The Railway and Canal Traffic Act, 1888*, pp. 38-50. See also *British Railways and Canals*, by "Hercules," chap. ii. (a pro-trader brochure, published in London in 1885). A summary of the railway point of view will be found in the address of Mr. Pope, Q.C., representing the London & North-western Railway before the Board of Trade, October 29, 1889, reported in *Railway News*, November 2, 1890, pp. 778-780. See also Grierson, *Railway Rates, English and Foreign*, pp. 98-106.

the portions remaining. Consequently there are still in effect sections of the Railway Clauses Consolidation Act, 1845, the Railway and Canal Traffic Act, 1854, the Regulation of Railways Act, 1868, and the Regulation of Railways Act, 1873. Since 1888 jurisdiction in regard to actual rates has been given by an Act of 1894; while, under a law of 1904, the powers of the Commission in regard to private sidings have been made more definite by an interpretation of the "reasonable facilities" clause of the Act of 1854.¹

II.

TERMINALS, REASONABLE FACILITIES, AND THROUGH RATES.

The Act of 1888 had recognized terminals. The Provisional Orders Acts gave them definite form. The matter was finally passed on by the Commission in 1891 in a decision which upheld that of 1885.² Justice Wills, who gave the decision in the former terminal case, was at this time the judicial member of the Commission. On appeal the decision of the Commission was upheld. While the question of the legality of terminals has thus been settled, there still remains the question of the right of the trader to be exempt from the payment of terminals under special conditions. This question is of especial interest in connection with the mining and manufacturing districts, where the establishments furnishing and receiving freight are usually situated on private sidings or on private railways. The importance of these sidings is shown in the fact that, while at the Sheffield freight station the tonnage in 1900 was 580,000, at a near-by siding it was 1,100,000. In 1894 the Commission was given jurisdic-

¹For detail concerning the unrepealed sections see Woodfall, *The New Law and Practice of Railway and Canal Traffic, etc.*, Appendix A.

²*Sowerby & Co. v. Great Northern Ry. Co.*, 7 Ry. and Canal Traffic Cases, 156.

tion in claims for exemption from payment of terminal charges at sidings when it was alleged that the services had not been performed. Under the provision of the Act of 1888, requiring the railway to distinguish conveyance from terminal charges, it had been held that the responsibility of the railway might be discharged by stating that the whole payment was for a conveyance rate.¹ But the Court of Appeal decided in 1897 that it was incumbent on the railway, in such a case, to prove that it did not charge for terminals.² The Commission has power to allow a rebate from sidings charges without proof that any definite amount of terminal is included in the rate. A *prima facie* case for such a rebate is made out, if it is shown that, in respect of similar traffic between substantially the same termini, and passing over substantially the same routes, a sidings trader who does not require or use any terminal accommodation or services is charged the same amount as a trader who uses the station.³ But the latter rate must not be simply a paper rate.⁴ In calculating the amount of the rebate, it has, in general, been the practice of the Commission to follow the rule in *Pidcock's case*; i.e., to assume that the service charges are in the same proportion to the rates actually charged as the maximum service charge would be to the sum of the maximum rates,—i.e., the maximum rate and the maximum terminals.⁵

The through-rate clause of the Act of 1888 provides that through rates, stating the amount, route, and appor-

¹ *New Union Mill Co. v. Great Western Ry. Co.*, 9 Ry. and Canal Traffic Cases, 160.

² *Salt Union, Ltd. v. North Staffordshire Ry. and Others*, 10 Ry. and Canal Traffic Cases, 179.

³ *Vickers, Sons & Maxim, Ltd. v. Midland Ry. and Others*, 11 Ry. and Canal Traffic Cases, 359.

⁴ *Cowan & Sons v. North British Ry.*, 11 Ry. and Canal Traffic Cases, 371.

⁵ *Pidcock v. Manchester, Sheffield & Lincolnshire Ry.*, 9 Ry. and Canal Traffic Cases, 45.

tionment of the rate, may be proposed by a railway, a canal company, or a trader. In case of dispute regarding the rate or its apportionment the matter is brought before the Commission. In apportioning the through rate, the commissioners are to consider the special circumstances of the cases, and are not to compel any company to accept lower mileage rates than it may for the time legally be charging for like traffic, carried by a like mode of transit on any other line of communication, between the same points, being the points of departure and arrival of the through route.

Reasonable facilities in general must be such as can reasonably be required of the railway company, due allowance having been made for the way in which the service is already performed.¹ Similarly, in a reduced through rate there must always be considered whether there is a commensurate advantage to the railway company.² *Prima facie*, it is against public interest to interfere with vested legal rights, unless some compensation or equivalent is given. There must, therefore, be evidence both of public interest and reasonableness in favor of the rate and route sufficient to outweigh the former considerations.³ The fact that two competing routes will tend to make either company treat the traders more reasonably is a consideration bearing on the question of public interest.⁴ At the same time the Commission will not grant a through rate which creates unhealthy competition.⁵ If there are

¹*Newry Navigation Co. v. Great Northern Ry.* (Ireland), 7 Ry. and Canal Traffic Cases, 176.

²*Plymouth Incorporated Chamber of Commerce v. Great Western Ry. & L. & S. W. Ry.*, 9 Ry. and Canal Traffic Cases, 72; 10 *ibid.* 17.

³*Didcot, Newbury & Southampton Ry. v. Great Western Ry. & L. & S. W. Ry.*, 9 Ry. and Canal Traffic Cases, 210.

⁴*Plymouth, Devonport & S. W. Ry. v. Great Western Ry. & L. & S. W. Ry.*, 10 Ry. and Canal Traffic Cases, 68.

⁵*Didcot, Newbury & Southampton Ry. v. L. & S. W. Ry. and Others*, 10 Ry. and Canal Traffic Cases, 17.

grounds for the Commission granting something claimed as a proper facility for using railways, an objection grounded on its inconvenient consequences to railway companies by reason of arrangements made by themselves will not be sufficient reason for not granting it.¹ The particular circumstances of the proposed route and rate must be considered. The reasonableness of a rate over a proposed route is not to be measured by an existing rate over an alternative route, even if the rate over the latter route may be reasonable.²

Incident to granting a through rate, a through booking (ticketing) arrangement may also be made.³ While the Commission has not attempted to lay down any general principle on which through rates are to be apportioned, it will consider any special expenses in construction or special charges a company may have been empowered to make.⁴ It is not clear that the Commission has power to rescind a through rate once established under the Act of 1888.⁵ So far no such action has been taken.

In the claims made by canal and by dock companies to obtain through rates, considerable emphasis has been laid upon the technical interpretation of the word "railway." Thus it was decided in 1897 that the powers the Manchester Ship Canal possessed to construct railways on its quays, although these railways were simply for its own service, constituted it a railway company. In 1901 the action of the Commission in approving a through rate arrangement for a dock company was overruled on the

¹ *Corporation of Birmingham & Sheffield Coal Co., Ltd. v. Manchester, Sheffield & Lincolnshire Ry., Midland Ry., & L. & N. W. Ry.*, 10 Ry. and Canal Traffic Cases, 62.

² *Didcot, Newbury & Southampton Ry., etc. v. Great Western Ry., etc.*, *id. supra*.

³ *Didcot, Newbury & Southampton Ry. v. Great Western Ry. & L. & S. W. Ry.*, 10 Ry. and Canal Traffic Cases, 1.

⁴ *Forth Bridge & North British Ry. Co. v. Great North of Scotland Ry. & Caledonian Ry.*, 11 Ry. and Canal Traffic Cases, 1. This would cover, for example, "bonus mileage," or an arbitrary, in the case of an expensive bridge.

⁵ *Great Northern Central Ry. (Ireland) v. Donagh Ry.*, 11 Ry. and Canal Traffic Cases, 47.

ground that the railways possessed by the dock company did not constitute a railway within the meaning of the act.¹ In 1903 a further application of the same company, subsequent to its acquisition of a short railway with which it had made connections, was refused on the ground that the difficulties of exchange of traffic did not justify the granting of such an application.

The Commission has looked at each through-rate case by itself. It has refrained from proposing a through rate. It has limited its action to the acceptance or rejection of the proposed through rate as brought before it. The power to propose through rates has been of little value to the traders. Normally, they have not been possessed of the exact knowledge necessary to the making of a through rate, with the result that they have been successful only in one out of five applications. The following summary gives details with reference to the through-rate applications formally acted upon by the Commission:—

YEAR.	By canal company.		By dock company.		By railway company.		By traders.		By municipal corporation and traders.	
	Granted.	Refused.	Granted.	Refused.	Granted.	Refused.	Granted.	Refused.	Granted.	Refused.
			No action prior to 1895.							
1895	2	—	—	—	—	—	1	1	—	—
1896	1	—	—	—	1	—	—	—	—	—
1897	1	—	—	—	3	—	—	—	—	1
1898	—	—	—	—	—	—	—	—	—	—
1899	—	—	—	—	2	1	—	—	—	—
1900	—	—	—	—	—	—	—	—	—	—
1901	—	—	—	—	—	—	—	—	—	—
1902	—	—	1	—	—	—	—	—	—	—
1903	—	—	—	2	—	—	—	2	—	—

¹*London and East India Docks Co. v. Great Eastern Ry. & Midland Ry.*, 11 Ry. and Canal Traffic Cases, 57. This was a majority decision, Peel dissenting. The decision of the Court of Appeal was given by Mr. Justice Wright, who was a member of the Commission when the Manchester Canal case was decided. He distinguished the cases.

III.

UNDUE PREFERENCE.

The question of "undue preference" has long engaged attention in England. Complaints were made during the investigation of 1882 that many anomalies existed in domestic rates. Thus London sugar refiners complained that, while Greenock was double the distance from given points, sugar was being carried to these points at the same rates as were given to London.¹ But it was against low import or *preferential* rates, which intensified the competition to which different industries were subjected, that especial attention was directed.² The Act of 1873 had left much to the discretion of the Railway Commission in dealing with the question of undue preference. In the parliamentary discussions of 1887 and 1888 there were constant complaints of preferential rates. It was stated that no general measure dealing with railway traffic could be considered satisfactory which did not prevent preferential rates in favor of foreign products.³ The government held, however, that no difference should be made between English merchandise and foreign merchandise because of origin.⁴

The undue preference section of the Act of 1888 provides that where, for the same or similar services, lower rates are charged to one shipper than are charged to another, or any difference in treatment is made, the burden of proof that such actions do not constitute an undue preference shall be on the railway. In considering

¹See evidence of J. H. Balfour Browne before the Select Committee of 1882, explanatory of the factors involved, answers to questions 1297 and 1298.

²In addition to the evidence bearing on this point contained in the *Select Committee Report of 1882*, see also detail in the *Report of the Royal Commission on Depression of Trade and Industry, 1886*.

³Motion of Earl of Jersey, Hansard, 1888, third series, vol. 322, p. 1796. This was defeated by a vote of 72 to 45.

⁴Lord Salisbury, Hansard, 1888, third series, vol. 323, p. 1052.

whether the action complained of constitutes an undue preference, the commissioners are to consider "whether such lower charge or difference in treatment is necessary for the purpose of securing in the interests of the public the traffic in respect of which it is made. *Provided that no railway company shall make, nor shall the commissioners sanction, any difference in the tolls, rates, or charges made for or any difference in the treatment of home and foreign merchandise in respect of the same or similar services.*"¹ The final clause of the section prohibits a higher charge for similar services, for the carriage of a like description and quantity of merchandise, for a less than is charged for a greater distance on the same line of railway. The concluding clause of the section is not only wider than the "long and short haul" clauses of the American statutes, it is also much wider than the prohibition hitherto existing in English legislation. An attempt was made by the railway interest to have a "long and short haul" clause placed in the legislation. It was argued that where a question of preferential rates came up, the comparison should in fairness to the railway, be made with traffic carried over the same portion of the line.² It was held, however, that the consideration of this matter could safely be left to the discretion of the Commission.

Complaints concerning undue preferences have occupied a prominent place before the Commission. Broadly

¹ I have italicised this so as to bring out the distinction of treatment between home and foreign traffic. In the bill, introduced in 1887, clause 25 provided that the commissioners were to consider whether the difference in charges or treatment was necessary "for the purpose of securing the traffic in respect of which it was made." The vague phrase, "in the interests of the public," contained in the legislation of 1888, was placed in the Bill of 1887 by amendment.

² The proposal was voted down, both in Grand Committee of the House of Commons and in the House itself. The motion will be found in Hansard, 1888, third series, vol. 329, p. 452. The statement of Mr. Asworth, *Hearings before the Committee on Interstate Commerce of the United States Senate, etc.*, 1905, vol. iii. p. 1851, that there is in the Act of 1888 a "long and short haul" clause—"the short distance included in the long distance"—is evidently attributable to the fact that he had not a copy of the act before him.

speaking, the subject-matter of these fall under the headings of: (a) *differential rates*, concerned with disparities in domestic rates and including as sub-heads export rates, group rates, and rebates in respect of quantity; (b) *preferential rates*, concerned with disparities between home and import traffic. Before 1888 inequalities of charges for like services were only *prima facie* evidence, and the burden of proof was on the complainant: now it is on the railway. In the earlier decisions no rule is apparent. Each case was considered by itself. A decreased rate to develop a particular traffic in a particular district was an undue preference. The mere fact preference existed was not sufficient: it must be shown to be "undue" and "unreasonable." Differences in rate might be allowed where there were differences in the cost of conveyance.¹

Additional points have been made under the present Commission. A contract to give exclusive use of a given station to a particular colliery is an undue preference, as are also lower tolls given by a navigation company to prevent a large dealer moving his business.² Normally, similar charges should be made for similar services.³ An unreasonable preference is a question of fact, and no general principle will be laid down.⁴ Competition is a circumstance to be taken into consideration, and the extent to which it is to be considered is a question of fact, not law.⁵

¹ For a summary of the law on this point, prior to 1888, see Woodfall, *op. cit.*, pp. 77-82. See also Darlington, *Railway Rates*, chap. iv.

² *Midland Local Board v. Lancashire & Yorkshire Ry.*, 8 Ry. and Canal Traffic Cases, 74; *Fairweather and Others v. Corporation of York*, 11 Ry. and Canal Traffic Cases, 201.

³ *Tyson & Son v. Great Eastern Ry., Lancashire & Yorkshire Ry., and Others*, 11 Ry. and Canal Traffic Cases, 214.

⁴ *Per Lord Herschell in Pickering Phipps and Others v. London & N. W. Ry. and Others*, on appeal, 8 Ry. and Canal Traffic Cases 100, 101; *Jessneress Chamber of Commerce v. Highland Ry. Co.*, 11 Ry. and Canal Traffic Cases, 218.

⁵ *Pickering Phipps*, case cited, p. 87. Group rates are authorized by Section 29 of the Act of 1888. See in this connection the important decision given in *Dunlop Main Colliery Co. Ltd. v. M. S. & L. S. Ry.*, 11 App. Cas. 97.

There can be no mathematical equality in regard to the charges or advantages between places which are outside of a group and the different members of a group. Competition and convenience to the neighborhood are to be considered as affecting the justifiability of a group rate.¹

On the question of differential rates the Commission has reversed itself. As has been indicated, the Commission is empowered to consider whether the rate complained of "is necessary for the purpose of securing in the interests of the public the traffic in respect of which it is made." In 1890² complaint was made that lower rates on grain and on flour were given from Cardiff to Birmingham than from Liverpool to Birmingham. The distances were respectively 173 and 98½ miles. The railway company contended that this was on account of competition, and that the lower rate was necessary (1) in its own interest, (2) in the interests of the public. Direct inland communication exists between Bristol and Birmingham by way of the Severn River and canal navigation. There is also a combined sea and rail route.

Justice Wills pertinently said Parliament had dealt with the matter of undue preferences with a "faltering hand." It had left to the Commission the responsibility of deciding many things which would more naturally have been laid down in legislation.³ The somewhat inchoate nature of the undue preference clause is, however, more correctly attributed to its compromise origin. While it was intended, in a general way, that the phrase "in the interests of the public" should protect the interests of the consumers, Justice Wills was undoubtedly correct in saying that Parliament had no clear idea of what it meant. He considered that the "public interest" must

¹*Pickering Phipps. etc.*, 87-88.

²*Liverpool Corn Traders' Association v. London & N. W. Ry., 7 Ry. and Canal Traffic Cases*, 125.

³Page 137.

be something wider than that of one of the two localities concerned, and stated that he could not see that any important "public interest" would be affected if the traffic in grain and flour should have to seek some other route from Cardiff to Birmingham.¹ The action of the railway in engaging in such competition created artificial conditions which interfered with the natural course of trade. Sir Frederick Peel put this point still more strongly: "A traffic which differs only from other traffic in being competitive can have no such a distinction made in its favor, however necessary a lower charge may be to meet the competition, or however much it may be to the benefit of the company to secure the traffic." The attempt of the railway to compete with the "natural advantages" of the traffic which went from the Severn ports² by sea and rail, or by inland water navigation, to Birmingham was unjustifiable. His general reasoning rested on the assumption that the low rail rate from Cardiff gave "little or no profit," and that therefore a penalty was being placed on Liverpool in the "highly remunerative rate" it paid.³

The unsatisfactory position taken by this decision in regard to the effect of competition, and the extent to which this was to be taken into consideration, was, however, apparently justified by the decisions on the matter. While the law was confused and contradictory, the leading decision—*Budd's case*—ruled water competition out of consideration.⁴ The effect of water competition on the undue preference clause was brought up

¹Pages 136-138.

²These are Cardiff, Portsmouth, Arromsworth, Bristol, and Sharpness.

³Pages 140, 141.

⁴*Budd (P. O.) v. L. & N. W. Ry.*, 4 R. and Canal Traffic Cases, 394. The cases bearing on this subject are dealt with by Justice Wills in his decision. See also Lord Herschell in *Proctoring Phoenix*, *infra*, 104, 105. See also *Battersworth and Ellis, A Treatise on the Law relating to Rates and Traffic on Railways and Canals*, etc., pp. 168-170.

again in 1892.¹ Complaint was made of an undue preference in flour and grain between the Severn ports and Birmingham, on the one hand, and Birkenhead and Birmingham, on the other. While the rate from Birkenhead to Birmingham, a distance of 98 miles, was 11s. 6d., the rate from Bristol to Birmingham, a distance of 141 miles, was 8s. 6d. The railway contended that the apparent anomaly was attributable to water competition. Both a majority and a minority decision were given. In the dissenting opinion, delivered by Sir Frederick Peel, it was held that, while the evidence justified low rates from the Severn ports, at the same time the Birkenhead rate should be reduced so as to give a lower mileage rate. The majority opinion upheld the railway position. The rates complained of were attributable to effective competition, maintained by a competing railway and by water competition. The existing inequality in rates was necessary to give the section of country around Birmingham the advantage of the supplies both from the Severn ports and from Birkenhead. Justice Wills stated that in the former decision he had construed "public interest" too narrowly. The public intended was the public of the locality or district. Any considerable portion of the population in general as opposed to an individual or an association was sufficient.²

While it is contended that one principle was applied in the first Corn Traders' case, because the amount of traffic affected was small, and that a different principle was applied in the second case because the amount of traffic affected was large,³ it would appear that the change of

¹ *Liverpool Corn Traders' Association v. Great Western Ry., 7 Ry. and Canal Traffic Cases*, 114.

² *Liverpool Corn Traders' Association v. Great Western Ry., 7 Ry. and Canal Traffic Cases*, 127.

³ See Boyle and Wagborn, *The Law relating to Railway and Canal Traffic*, vol. i. p. 4; also evidence of Mr. W. M. Acworth, *Committee on Interstate Commerce, etc.*, 1905, vol. iii. p. 1849.

position was, in reality, attributable to a decision in a case appealed from the Commission in 1891.¹ In this the construction of "public interest" had been involved. It was contended that a difference in rate complained of was not necessary for the purpose of securing the traffic in the public interest, and that the railway in making such a rate was seeking its own interest, not that of the public. This attempt to exclude the railway interest from "public interest" was denied by Lord Herschell. The point which should be considered, he stated, was not only the legitimate desire of the railway to obtain traffic, but also whether it was in the interest of the railway to secure this traffic rather than abandon it. The legislature, he continued, had recognised that there were cases where the traffic could not be obtained if the lower rate was raised, and where at the same time it would be unfair to demand as a condition of obtaining the traffic a reduction of the higher rate.² By judicial construction "public interest" has thus come to mean the controlling power of effective competition on particular rates. Undoubtedly there was a desire, when the legislation was under consideration in Parliament, to give the phrase a narrower construction. In 1887 it was stated that the railway, in carrying traffic on a rate competitive with sea-borne traffic, must show that there was a distinct public interest involved. The fact that some additional profit was obtained by engaging in such traffic was not sufficient.³

The "long and short haul" question comes before the Commission but seldom. When it does, it is not treated, as in the United States, as a form of preference demanding exceptional treatment. The Commission has recog-

¹ *Pichering Phipps and Others v. L. & N. W. Ry. and Others*, 8 Ry. and Canal Traffic Cases, 83.

² *Pichering Phipps, etc.*, 102 and 103.

³ See statement of Lord Salisbury, *Hansard*, 1887, third series, vol. 314, p. 332.

nized effective competition as a justification of a lower rate for the longer distance. Where a higher rate is charged for the shorter than for the greater distance, the less being included in the greater, the Commission has held that, in the absence of effective competition at the longer distance point, such an arrangement is not justifiable, and that the shorter distance point should share on a mileage basis in the low rate given to the longer distance point.¹ The effect of competition has also been recognized in the case of export traffic. In 1903, in the *Spillers & Bakers* case, a low "shipment" rate was held necessary to obtain traffic. It was considered impossible to raise this rate, and the dissimilarity of circumstances did not warrant a comparison of the higher domestic rate with the lower export rate.² In 1904 a briquette manufacturing firm claimed that it was unduly prejudiced, since it paid the domestic rate on its raw material, while the manufactured product came into competition abroad with coal carried on a low export rate. The Commission upheld the principle of export rates, and further found that the railway was under no obligation to regulate its charges with reference to the ultimate competition complained of.³

From an early date English railway law has held that wholesale rates for large shipments do not constitute an undue preference. So early as 1858 in *Nicholson's* case, a leading case, it was decided that carrying at a lower rate in consideration of large quantities and full train loads at regular periods was justifiable, provided the real object was to obtain a greater profit by reduced cost of carriage. In taking this point of view, it was recog-

¹ *Timm & Sons v. N. E. Ry., Lanc. & York Ry., and Others*, 11 Ry. and Canal Traffic Cases, 214.

² *Spillers & Bakers, Ltd. v. Taff Vale Ry.*; 20 The Times L. R. 101.

³ *Lancashire Patent Fuel Co., Ltd. v. L. & N. W. Ry., Great Central Ry., and Others*. A summary will be found in the *Railway Times*, August 13, 1904.

nized that various shippers would necessarily be excluded from the advantage of the low rate granted on such conditions.¹ In the decisions of the Commission of 1873 it was recognized that lower rates might be given because of trainload shipments or of ability to load a greater weight into trucks.² The general justification of such arrangements has been recognized by the present Commission.

An example from a case decided in 1900 will indicate the nature of the arrangement.³ A rebate of 3*d.* per ton from the established rate was to be made on condition that a minimum shipment of 25,000 tons of coal a year was guaranteed, and that the arrangement should last for five years. The Commission has, in various cases, held such rebates excessive.⁴ The ground taken has been that the rebate is justified by a reduction in cost to the company, and that the rebate should not be in excess of the saving to the company. It is obvious that such a practice as this has dangers connected with it. A considerable number of complaints have been directed against the excessive advantages obtained by Messrs. Rickett, Smith & Co. under their rebate arrangement with the Midland Railway. In one case, though the evidence is contradictory, there are the earmarks of a secret rebate.⁵ While the decisions of the old Commission recognized bulk of traffic as a justification for reduction of rates, the policy

¹ *Nicholson v. Great Western Ry.*, 5 C. B. (N. S.) 366. The text of the agreement complained of will be found in the foot-notes to pp. 382-408. See also *Evered v. L. & N. W. Ry.* (1877), 2 Q. B. Div. 267.

² *E.g.*, *Ransome v. Eastern Counties Ry.* (No. 2), 1 Ry. and Canal Traffic Cases, 109; *Girardot, Flinn & Co. v. Midland Ry.*, 4 Ry. and Canal Traffic Cases, 291; *Greenop v. S. E. Ry.*, 2 Ry. and Canal Traffic Cases, 319.

³ *Daily and Others v. Midland Ry. and Others*, 10 Ry. and Canal Traffic Cases, 305.

⁴ *E.g.*, *Charrington, Sells, Dale & Co. v. Midland Ry. Co.*, 11 Ry. and Canal Traffic Cases, 222; *Wallsall Wood Colliery Co. v. Midland Ry.*, *Railway Times*, July 25, 1903.

⁵ *Charrington, Sells, Dale & Co.*, *ut supra*, p. 229.

of the present Commission has not been clear-cut. In some cases it has recognized quantity as a justification for a rebate.¹ But it has in other cases attempted to confine cost to mere economies of book-keeping, attributable to more prompt settlements, etc.;² and it has expressed the dictum that rebates in respect of quantity would justify a differentiation of charges in so many cases that the rule against preference would be in danger of disappearing, "and the small trader would be in a more helpless position than the position in which he now is."³

While the traders recognize the value of export rates, and the effects of competition thereon, the conditions which affect the import rate are often neglected, and the low rail rates given on imported goods are often attributed to the stupidity, if not turpitude, of the railways in preferring home to foreign goods. When the Act of 1888 provided that the Commission should not "sanction any difference . . . in the treatment of home and foreign merchandise in respect of the same or similar services," it was claimed that this absolutely forbade preferential rates, and that the home traffic would therefore be carried at the same as that of foreigners.⁴ Notwithstanding this enthusiastic prediction there is at present a reiterated demand for a select committee to investigate the question of preferential rates.

The discussion of preferential rates in England has proceeded along lines familiar to every student of the effects of water competition on railway rates. "Why,"

¹ *Daddy and Others*, *ut supra*, p. 310. See also *Hickleton Main Colliery Co. v. Hull & Barnsley Ry.*, *Railway Times*, July 25, 1903. In this case the consideration of the lower rate was a minimum of 38,000 tons per annum.

² *E.g.*, *Charrington, Sells, etc.*, *ut supra*, 230.

³ *Ibid.* 231.

⁴ *Waghorn and Stevens, Report upon the Proceedings of the Inquiry held by the Board of Trade, 1889, 1890*, pp. 12 and 106. This report to the Lancashire and Cheshire, Devon and Cornwall, and Irish Conferences (traders' organisations), was published at Manchester in 1890. It contains a searching but extremely acrid and biased examination of the railway position.

asks one, "if they (the railways) can carry at a profit from foreign countries, can they not carry home produce at the same rate?"¹ If the London & North-western carried a trainload of meat from Liverpool to London at 25s. because it was American, it should be able to do the same wherever the meat came from.² "*Ex hypothesi* they (the railways) already got a profit out of the produce they carried, . . . and what they would have to do was to put the English farmer and producer on the same footing as the foreigner."³

The question of preferential rates was brought before the Commission in 1895 in an exceedingly important case, which lasted eight days.⁴ Complaint was made that the railway charged lower rates from Southampton docks to London on the following goods of foreign origin—wool, hay, butter, cheese, lard, hops, fresh meat, bacon, hams—than it charged on similar articles of home origin, which were normally carried a shorter distance, and that the services rendered in respect of the foreign traffic were not less than those rendered for the home traffic in the proportion that the rates were lower. A few examples will serve to show the nature of the disparity complained of:—

STATION.	Distance travelled.	Rates on fresh meat, hay, and hops to London.		
		Rate for meat.	Rate for hay.	Rate for hops.
Southampton docks	76 miles	17s. 6d.	5s.	6s.
Southampton town	76 "	36s. 3d.	9s. 8d.	20s. 10d.
Alton	45 "	9s. 3d.	7s. 4d.	20s.
Botley	76 "	37s. 6d.	9s. 8d.	22s. 7d.

¹ Lord Henniker, Hansard, 1885, third series, vol. 315, p. 412.

² Mr. Mundella, Hansard, 1883, third series, vol. 329, p. 413.

³ Mr. Chamberlain, Hansard, 1883, third series, vol. 339, p. 445.

⁴ *Mansion House Association on Railway and Canal Traffic for the United Kingdom v. London & South-western Railway, 9 Ry. and Canal Traffic Cases, 20.*

Back of the complaint lay a competition of ports for foreign traffic. The London docks were in competition with the Southampton docks, which were owned by the London & South-western Railway.¹ Competition existed between the all-water route to London and the water and rail route via Southampton.

At first the railway endeavored to justify the apparent anomalies on the grounds that the rates complained of were made on the basis of water competition, and that, besides, they were balances of through rates. But the Commission ruled that such matters could not be considered in evidence under the provisions of the Act. Under these conditions the railway had to fall back on the unsatisfactory standard of cost of service. It was shown that the rates for the home traffic covered a variety of services—*e.g.*, receiving, weighing, loading, covering, superintendence, provision of station accommodation, switching—which were not included in the rate on the foreign goods. The foreign merchandise was less valuable, less liable to damage, more easily and expeditiously handled, could be dealt with at times more convenient to the railway, always in larger quantities, and generally in a much more economical manner. On account of better baling, to cite one example, three tons of foreign hops could be loaded into a truck that would hold only two and a half tons of English hops.

The traders contended that such conditions of traffic as regularity and quantity, while admitted, were not capable of being included in the "similar services" spoken of in the undue preference section. Their contention was in substance that, while there might be differences in the case of home traffic because of dissimilarity of circum-

¹ When these docks were acquired by the railway in 1892, it was anticipated they would be a formidable competitor of the London docks. For information descriptive of the highly developed facilities for handling traffic at the Southampton docks, see *Railway Age*, July 1, 1904; *Railway News*, January 7, 1906.

stances, in the case of the foreign traffic it was intended that there should not, on any account, be any difference in favor of foreign goods.

Had the contention of the traders been successful, it would have established a principle. But the decision of the Commission, which has been claimed as a victory by both parties, was of a compromise nature, and proceeded on the careful lines already laid down that undue preference is a matter of the facts of the particular case. The articles with which the decision concerned itself were hops, fresh meat, and hay. These were the only articles in which there was any considerable traffic from the stations intermediate between Southampton and London. The rates quoted on the other articles were simply "paper" rates. Sir Frederick Peel, who decided on the facts, held that the differences between the home and the import rates on meat, hops, and hay were not justified.¹ While his colleagues accepted this opinion, it was with hesitation. They both had doubts as to the alleged preference on meat,² and justly so. The average consignment of foreign meat from Southampton was 37 tons. In a period of seventeen months 10,638 tons of meat were shipped in 286 consignments. On the other hand, from Salisbury, the leading English meat centre concerned, 231 tons in 825 consignments were shipped in the same period. It is apparent that, where the whole series of costs would be so different, the Commission strained the idea of cost of service to the breaking point, and in doing so favored the home producer.

The decision was based on the idea, manifestly correct, that it was the intention of the statute to eliminate competition from the factors to be considered. At the same time the majority of the Commission are satisfied that the real factor controlling the rate situation in this case

¹ *Mansion House case*, 32, 33.

² *Ibid.* 32 and 43.

is water competition. As was said by Justice Collins, there was "no reason or principle in leaving out of account the fact of a rival route by rail or water from the point of departure to the point of arrival in the case of goods from abroad and taking it into account, as it clearly may be taken into account, where the comparison is between home goods only."¹

This unsatisfactory decision, which cost the traders £2,000 in law costs, obtained no general principle for the traders, and at the same time forced the railways to depend upon the artificial justification of cost of service. While the decision is of such a nature that in a case where there is real competition of home and foreign products a different verdict might be given, no further action in regard to preferential rates has been taken before the Commission. In 1899 the question of preferential rates was brought before the Board of Trade under the conciliation clause, but no satisfactory agreement could be obtained.²

It was Mr. Chamberlain who introduced into the legislation the clause under discussion. The agitation in regard to preferential rates has been given an added vigor by his preferential trade movement. Back of much of the outcry concerning preferential rates is a hazy protectionism. The support Mr. Chamberlain has obtained, for example, in the iron and steel industry is in considerable part due to preferential rates on iron and steel products, although the matter is complicated by the export rates given by the railways of competing countries.³

The control over docks by railway companies, which was

¹*Mansion House case*, 32. See also the statement of Lord Cobham in *Didcot, Newbury & Southampton Ry. Co. v. Great Western Ry. & L. & S. W. Ry.*, 9 Ry. and Canal Traffic Cases, 210.

²Case 16, *Seventh Report of the Board of Trade, under Section 31 of the Act of 1888*.

³See *Report of the Tariff Commission* (Chamberlain), 1904, vol. i.: The Iron and Steel Industry, under heading "Preferential Rates." *Contra*, see "British Railways and Goods Traffic: Is Preference given to Foreign Products?" A. Dudley Evans, *Economic Journal*, March, 1905.

objected to at an earlier date as a source of discrimination,¹ has been increasing of recent years. The railways have found it necessary to obtain control not only of docks, but also of steamer lines connecting with the Continent, in order to obtain the through rates which are necessary, if the import and export traffic are to balance, and thus permit a more economical use of rolling stock.² Complaint is made that the railways are spending large sums in erecting docks and warehouses at ports in order to encourage foreign trade, thereby still further increasing the number of preferential rates. The provisions of the Act of 1888 with reference to the right of the traders to have through rates from foreign points distinguished into their domestic and foreign portions are somewhat ambiguous. In the Southampton case the traders were unable to ascertain the foreign portion of the rate. As a result of this condition, an attempt was made in 1904 to obtain a provision in a special railway act, requiring that the railway should distinguish on its rate books, in the case of imports on a through rate, the portions attributable to (1) land carriage abroad, (2) dock, harbor, and shipping charges abroad, (3) conveyance by sea, (4) dock, harbor, and shipping charges at the British port, (5) railway charges in the United Kingdom. This was voted down by 103 to 79 on the ground that it was unfair to pick out a particular company in connection with what was a general matter.³

The farmers of the United Kingdom are subject to com-

¹Section 27 of the draft *Report of the Select Committee of 1882*, p. xxviii.

²The practice of consigning goods on through rates is increasing. At the same time Continental railways—e.g., those of Belgium—refuse to make through rates, except with railway companies. As to the alleged evil effects of such arrangements, see remarks of Mr. Hanbury, president of the Board of Agriculture, *Hansard*, 1902, fourth series, vol. cviii, p. 1640. See also Boyle and Waghorn, *op. cit.*, vol. i, p. 304.

³Lancashire and Yorkshire Railway Bill. For text of the Instruction see *Hansard*, 1904, fourth series, vol. 131, p. 1473.

petition from many points. To cite but a few examples: Algerian fruit and vegetables, French hops, Danish butter and eggs, compete with the home products. The hop rates complained of when President Hadley wrote still exist. Not only do the English farmers complain of preferential rates, there is also complaint from Ireland that the existing rate basis discriminates against Irish eggs, butter, and bacon. It should be noted, although such a consideration is ruled out by the Railway Commission, that the low rates complained of are balances of through rates. It costs about £10 for freight charges to place one ton of Algerian fruit or vegetables in London. In fruit shipments the foreigners have had the advantage that a considerable number of the British growers are not giving sufficient attention to grading and packing and, in general, to the requirements of consumers. The following may be taken as examples of the complaints in regard to Danish competition:—

	Distance (mixed route).	Commodity.	Rate per ton.
Esbjerg (Denmark) to Birmingham	553 miles	butter	47s. 6d.
Esbjerg (Denmark) " "	553 "	eggs	58s. 8d.
Armagh (Ireland) " "	358 "	butter	42s. 6d.
Armagh (Ireland) " "	358 "	eggs	50s. 0d.

The apparent disparity of rates on a distance basis disappears when it is remembered that on the Danish products there is a long water haul, and that there is also the difference between a car lot and a less than car-lot basis. The Danish rates are quoted on minimum consignments of ten tons, while the Irish rates are based on three hundredweight.

The more enlightened English farmers recognize the effects of water competition. They know that it would not benefit them to have the through rate raised, as it would simply mean that the foreign produce would move more cheaply by an all-water route. When the London

& South-eastern Railway in 1887 placed foreign hops on the same rate basis as domestic hops, the result was that the former moved by water to London. The English producer was injuriously affected by the increased competition which lowered the price. At present approximately 90 per cent. of the Continental produce imported by way of Boulogne and Calais goes by water to London. While the farmers recognize the superior facilities for handling foreign goods, they at the same time consider that the disparity between home and foreign rates is too great.¹

Some part of the complaint in regard to preferential rates is attributable to misunderstandings in regard to rate conditions as well as to a lack of initiative on the part of the farmers. The Royal Commission on Agriculture stated in 1897 that, while co-operation among farmers was necessary in order to obtain lower rates, this matter could not be helped on by legislation.² But little has been done by the farmers to accomplish this.³ While there is much unorganized complaint in regard to agricultural rates, the farmers are presenting very little evidence before the Departmental Committee, which is at present investigating the matter. The railways have been more willing than the farmers to co-operate. For forty years the London & North-western has been collecting small consignments of agricultural produce along its lines. These it forwards in bulk, delivers them to the London salesmen, pays market dues, collects the proceeds from the salesmen, and forwards the balance to the shippers. The London & South-western, which does a large business in

¹ *E.g.*, evidence of W. W. Berry, a prominent hop-grower of Kent, before the *Royal Commission on Agricultural Depression*, 1897, answers to questions 49,190, 49,226, 49,258. See also statement of Mr. Sinclair, Hansard, 1904, fourth series, vol. 136, p. 295.

² *Final Report*, p. 529.

³ See statement of the president of the Board of Agriculture, Hansard, 1902, fourth series, vol. 108, p. 1639.

package freight, undertook recently to supply the farmers along its lines with copies of Pratt's *The Organization of Agriculture*. All of the railways have been active in giving special rates to encourage agricultural shipments.¹ But, while the Danes are shipping produce into England on relatively low rates, which are the result of co-operation, 70 per cent. of the domestic agricultural shipments on the North-eastern Railway are below three hundredweight, and 90 per cent. fall below one ton.

IV.

CONTROL OVER ACTUAL RATES.

In dealing with the rate policy of the Commission, a distinction must be made between the period prior to 1894 and that subsequent thereto. Though it had been stated in 1872 that legal maximum rates afforded but little real protection to the public,² the system was continued by the Act of 1888. While the work of the Board of Trade, as embodied in the Provisional Orders Acts, meant in all cases the systematization and in many cases the reduction of the maxima, the outcome was not satisfactory to the traders, some of whom wanted a general reduction of rates, regardless of the cost to the railways. The change of status in regard to *reasonable* rates introduced by the Act of 1888 was more apparent than real. The former Railway Commission had stated that, in addition to there being a necessity that rates charged should be within the maximum, there was also the added requirement that

¹ For full detail concerning the special arrangements made by British railways in this regard see *Railway Rates and Facilities*, copy of correspondence between the Board of Agriculture and Fisheries and the Railway Companies of Great Britain, etc., 1904. A large number of details bearing on the question of preferential rates will be found in Pratt's *Railways and their Rates*. This book has come to hand since the material contained in this section was set up.

² *Report of the Joint Select Committee on Railway Companies Amalgamation, 1872*, p. xxxiv.

they must be reasonable.¹ No legal action had been taken, however, in regard to this matter. Two judicial decisions given in 1883 and in 1887 seemed to uphold the position that a maximum rate sanctioned by Parliament was conclusively reasonable.² But the statements in these decisions are simply dicta, since the question of reasonableness of rates was not directly involved. The Act of 1888, however, settled that the maximum rate was conclusive of reasonableness.³

At the outset of its work the only way in which the Commission was brought in touch with rates was through the provisions concerned with undue preference and with through rates. The Commission will not state beforehand that a rate is preferential.⁴ One of the commissioners, Sir Frederick Peel, has taken the position that certain powers over actual rates were given to the Commission. He has construed the statement in the "undue preference" clause which directs the commissioners to consider "whether the inequality cannot be remedied without unduly reducing the rate charged to the complainant" to give a power of reducing the higher rates.⁵ Concerning this interpretation there is some doubt. Justice Wills holds that the words in question do not confer any rate-making power, but simply indicate the circumstances to be considered.⁶ In an Irish case in 1897, in which the question of distributive rates was involved, it was held

¹ Fourth Report of the Railway Commissioners, p. 6, Section 14.

² See *Manchester, Sheffield & Lancashire Co. v. Brown*, 8 App. Cas. 715, and *Great Western Railway Co. v. Macarty*, 12 App. Cas. 218. In the latter case Lord Watson took the position, "Prima facie, I am prepared to hold that a rate sanctioned by the legislature must be taken to be a reasonable rate."

³ See Act of 1888, Section 24, Sub-section 6, and Sub-section 10. *Report of Board of Trade, 1890, on Classification of Merchandise Traffic*, etc., p. 17.

⁴ *In re Hull Vale Ry. Co.*, 11 Ry. and Canal Traffic Cases, 80.

⁵ Note his dissenting opinion in the Liverpool Corn Traders' Association case in 1893.

⁶ Select Committee on Railway Rates and Charges, 1896, answer to question 8203.

that the rate to the shorter distance point should be 3d. per ton less than the rate to the longer distance point; but no attempt was made to determine the longer distance rate.¹ In 1900 a temporary reduction of a canal toll was directed.² However, it cannot be said that these decisions have established the power of the Commission to reduce rates under the undue preference clause. Sir Frederick Peel also holds that the Commission may fix a through rate, no matter what the railways concerned may have agreed upon. While this matter has not been passed on, the weight of opinion is against such an interpretation.³ It would appear, although this also has not been passed upon, that the Commission has no power to test the reasonableness of an established through rate. While the Commission has power to fix a through rate, if the parties do not agree, it would appear, although this is a moot point, that it has no power to apportion such a rate.⁴ The Commission stated explicitly in 1895 that it had no power under the Act of 1888 to inquire into the reasonableness of a particular rate.⁵ The various reductions of rate which have been ordered in connection with the workmen's trains applications are given under an entirely different jurisdiction.⁶

In the matter of group rates there has been some conflict between the English and the Irish decisions. The

¹ *Carrickfergus Harbor Commissioners and Others v. Belfast Northern Counties Ry.*, 10 Ry. and Canal Traffic Cases, 74.

² *Fairweather & Co. and Others v. Corporation of York*, 11 Ry. and Canal Traffic Cases, 201.

³ Evidence before Select Committee of 1893, answers to questions 7963, 7964, 7966. See also the extremely guarded statement of Justice Wills before the same committee, answer to question 8264.

⁴ This point was raised in the Forth Bridge case, 11 Ry. and Canal Traffic Cases, 5, but was not passed upon.

⁵ *West Ham Corporation v. Great Eastern Ry.*, 9 Ry. and Canal Traffic Cases, 15.

⁶ *E.g., In re London Reform Union v. Great Eastern Ry.*, 10 Ry. and Canal Traffic Cases, 280. See Ferguson, *Railway Rights and Duties*, pp. 206, 207.

former regard competition and convenience as the most important factors. The latter lay more stress on distance. The appeals from the Commission have settled that competition is as important a factor in connection with rates as geographical position.

The question of the reasonableness of particular rates was suddenly brought before the Commission in 1894. The adjustments necessary in putting into force the rates under the revised maxima were great. The fact that fully one-half of the traffic is carried on exceptional rates, which are below the class rates, still further complicated matters.¹ At the same time there was an apparent desire on the part of some of the railways to give the traders an object-lesson in regard to the disadvantages of the legislative intervention which had brought some maxima below the actual rates formerly charged. And so the maximum class rates were published as the actual rates effective January 1, 1893. The outcry which followed quickened the work of adjustment, and led to an undertaking on the part of the railways that the rate increase should not be more than 5 per cent. But this did not prevent the enactment of a piece of panic legislation, passed hurriedly and without due consideration.² By this act it was provided that, where rates were directly or indirectly increased after December 31, 1892, they were *prima facie* unreasonable. The fact that the rate complained of was within the maximum was not to be a justification of the increase. The Commission was given power to deal with complaints arising under this act, subject to the provision that an application was first to be

¹ For detail concerning these rates see "Report on the Question of Slow Freights (England)," by Henry Smart, *Bulletin of the International Railway Congress*, July, 1904.

² A mass of detail pro and con will be found in the evidence attached to the *Report of the Select Committee of 1893*. See also Mavor, "The English Railway Rate Question," *Quarterly Journal of Economics*, April, 1894; Acworth, *The Elements of Railway Economics*, pp. 147-154.

made to the Board of Trade. Over seventeen hundred complaints were brought before the Board of Trade between the date of the passage of the act and the end of February, 1895.

In the investigations leading up to the Provisional Orders legislation the traders had all along been desirous of having the actual rates serve as maxima.¹ The evident intention of the majority of the members of the Select Committee of 1893 was that the rates in force at the end of 1892 should be the maxima.

In taking up the new functions imposed by the revolutionary Act of 1894, the Commission had a full appreciation of the difficulties of the new jurisdiction. Justice Collins said, "I cannot suppose that Parliament intended to take the management of these great trading companies [the railways] out of the hands of the practical men who work them, and to place it in the hands of the Railway Commissioners." The Commission had no intention to exercise a rate-making power. It was its intention to construe the legislation strictly. In the interpretation of the statute there was, however, a difference of opinion between the commissioners. Lord Cobham held that the Commission was not competent, of its own knowledge, to say whether a rate was reasonable or not. "No tribunal, however expert, would undertake to say that a 6s. 6d. rate for the carriage of coal from Derbyshire to London is reasonable, but that 6s. 9½d. is unreasonable." The legislature had, however, given a standard of reasonableness in the rate of 1892, and the rate could not be increased above this unless good reasons were shown.² In endeavoring to obtain some definite standard of measurement of reasonableness, the Com-

¹E.g., speech of J. H. Balfour Browne, already cited, p. 171. Evidence of Marshall Stevens before the Select Committee of 1893, answers to questions 2448 and 2518.

²*Derby Silkstone Coal Co., Ltd. v. Midland Ry.*, 9 Ry. and Canal Traffic Cases, 107.

mission ruled out all reference to competition, or to that more inclusive system, charging what the traffic will bear.¹ The opinion of the traders, that the rates in force at the end of 1892 should be maximum rates, received a partial support from Lord Cobham, who held that the fact that a rate had not been increased prior to 1892 created a strong presumption against the railway because it had not increased the rate when it had the unchallenged right to do so;² but Justice Collins held that conditions prior to 1892 could be considered, and that the reasonableness of a rate was to be tested by conditions existing or apprehended before the legislation came into force.³ Later decisions have taken into consideration conditions subsequent to 1894.⁴ There still remained the question of the criterion of reasonableness. Justice Collins held that this should be cost of service. Reasonableness, he held, must be measured by reference to "the service rendered and the benefit received." This, in his opinion, pointed to cost of service as the base, because "the service rendered and the benefit received was unaffected by the prosperity or misfortune of the parties to the contract."⁵ This squared with the views of the traders, who held that the true basis of a rate was cost of service.⁶ The fact that the legislation provided, in the first instance, a rate of an antecedent period as a criterion of reasonableness would seem to show an intention of ruling out in the present rate

¹ *E.g.*, *Charnock and Sacriston Collieries Co. v. North-eastern Ry.*, 9 Ry. and Canal Traffic Cases, 140. In *Black & Sons v. Caledonian Ry., etc.*, 11 Ry. and Canal Traffic Cases, 176, the Court of Sessions refused, on appeal, to grant the process which would enable the railway companies to investigate the books of the applicants to see what their profits had been during a given period.

² *Derby Silketone Coal Co. case*, 130.

³ *Ibid.* p. 111.

⁴ *E.g.*, *Black & Sons*, *ut supra*.

⁵ *Derby Silketone case*, 113. The decision in this regard is based on *Canada Southern Ry. Co. v. International Bridge Co.*, 8 App. Cas. 731, 732.

⁶ *E.g.*, letter of Sir James Whitehead, president of the Mansion House Association, *London Times*, December 22, 1892; also speech of J. H. Balfour Browne *ut supra*, p. 257.

any consideration of what the traffic would bear; for, if charging what the traffic would bear, in the present, were admitted as a present criterion of reasonableness, it is difficult to see how the past rate could serve as a standard of reasonableness, when, presumably, what the traffic would bear was something essentially different.

The increases in rates complained of, which have for the most part arisen in connection with coal traffic, have in a number of cases been indirect, attributable to decreases in the allowance made for wastage in the coal traffic, etc. The criterion the Commission has found it necessary to adhere to—cost of service—has tied it down to an arbitrary arrangement. To meet this condition, the railways have had recourse to technicalities savoring, in some instances, of subterfuge. In one case it was alleged that the increase complained of was attributable to an increase in the cost of cartage as distinguished from conveyance charges. The former fell under terminal services, over which the jurisdiction of the Commission was limited.¹

No general principle has been established in the unreasonable rate cases. The railways had claimed the right in 1893 to increase the rates by 5 per cent. as compared with the rates in force in 1892. While the traders never recognized the validity of this claim, the Board of Trade by 1898 had accepted this arrangement as justifiable. The important *Smith and Forrest* case, which came up in 1899, was intended to test this arrangement.² Complaint was made by the oil refiners of Liverpool and Manchester that an increase of 5 per cent. was unreasonable. The increase was in part direct, in part indirect, attributable to decreases in cartage rebates. The matters involved

¹*Mansion House Association, etc. v. L. & N. W. Ry.*, 9 Ry. and Canal Traffic Cases, 174. See especially the remarks of Lord Esher in the appeal proceedings, 199 and 200.

²*Smith & Forrest v. L. & N. W. Ry. and Others*, 11 Ry. and Canal Traffic Cases, 156.

were pertinent to the whole freight traffic of the United Kingdom, and affected future as well as past rates. The railways introduced statistical evidence showing that, because of various increases in cost, particularly in the case of labor, expenses were 5.1 per cent. higher in 1892 than in 1888 and 6.3 per cent. higher in 1898 than in 1892. The railways desired to carry the comparisons back to 1872, when many of the old rates had been fixed; but the Commission considered 1888 a sufficiently remote date, and comparisons were made with the conditions of 1891. It was found that an increase of 3 per cent. would be justified. The Commission has thus shown its intention to look at each case by itself. If a 5 per cent. increase should be found justifiable in a particular case, it would not necessarily have any bearing on a later decision.

The desire of the Commission not to engage in any rate-making experiments has kept it from making any statements as to general rates. It has concerned itself with the reasonableness of particular rates. The Commission has painstakingly endeavored to get at the cost involved. The decisions have been compromises. Where decisions have been against the railways, damages have been awarded on the basis of the difference between the increase and what was deemed a justifiable increase; and the railways have been ordered to desist charging the unreasonable rates. In a recent case an attempt was made to obtain an expansion of the unreasonable rate jurisdiction.¹ It was contended that it was unreasonable to increase a rate, although the increased rate was still below the point to which it had been decreased in 1894. The Commission did not, however, pass upon this question. It is apparent that, if such a contention were accepted, still more rigidity would be introduced

¹ *Milken & Asham Hematite Iron Co. v. Furness Ry. and Others*, reported in *Railway Times*, January 21, 1903.

into the system. The traders' anticipations as to the effect of the Act of 1894 have been nullified by the willingness of the Commission to consider conditions antecedent to the legislation. The whole position, it must be recognized, is an exceedingly artificial one. While the position taken by the Commission is strained and unsatisfactory, it is difficult to see, when it was specifically referred back to the conditions of 1892, what other method it could have adopted. By acting as it has, a degree of elasticity has been retained for the process under the legislation which it otherwise would not have possessed.¹

V.

It was objected at the outset that the judicial member would dominate the Commission, owing to the difficulty of distinguishing between law and fact. It has happened, however, that in the performance of their duties the lay members determine on questions of fact. At the same time, while the opinion of the *ex-officio* commissioner is final on a point of law, the lay members also form and express their opinions.

The government has throughout considered the requirement that one member of the Commission shall "be experienced in railway business" to mean that he shall have been a railway director or a railway manager.² Exception has been taken to this by the traders. To the attempt to obtain a business representative on the Commission, in addition to a railway representative, the

¹ The criticism directed against the Commission by Grinling, in *British Railways as Business Enterprises*, pp. 161-163, contained in Ashley's *British Industries*, is not wholly justified.

² Mr. Price, before his appointment to the Commission of 1873, had been chairman of the Midland Railway. Viscount Cobham, who succeeded Mr. Price in 1891, had been deputy chairman of the Great Western. On Viscount Cobham's resignation, early in the present year, he was succeeded by Mr. Gathorne-Hardy, who had been deputy chairman of the South-eastern.

railways are not opposed. It is from the government that the objection has come. Mr. Mundella, when president of the Board of Trade, said he would be glad to appoint a "really" business man who should be an impartial authority, fairly representative of the trading class. Mr. Mundella had stated that the Commission as then constituted was generally unsatisfactory.¹ An attempt was made by the traders in 1894 to so amend the legislation that one of the commissioners should be "experienced in trade or commerce." This was not pressed beyond the first reading.² Mr. Bryce, who succeeded Mr. Mundella, held, however, that no such restriction as his predecessor had favored should be placed on the choice of the government. The desire to have a commercial representative is still active. Believing that the commissioners should be assessors, possessed of expert knowledge, rather than judges, the traders have urged that the terms of the commissioners should not exceed ten years, so that there might be an opportunity to keep constantly in touch with actual conditions.

Looking at conditions as they are, it is apparent that the presence of a railway representative on the Commission has meant that those appearing before it have been more careful to give essential details. There is no real cause for complaint, from the traders' standpoint, concerning the services which the lay members have performed. The railway representative, for example, in the enforcement of the legislation of 1894 has followed very closely the ideas favored by the traders. Sir Frederick Peel has been willing to give a broad construction to the legislative provisions concerned with control of rates.

The average English trader asks for a process which

¹ Hansard, 1894, fourth series, vol. 28, pp. 792, 793.

² The text of this bill will be found in the *Railway Times*, June 16, 1894, p. 752. See also *Report of the Select Committee of 1893*, p. xiii.

shall be "short, sharp, and decisive." And to him the process of the Commission has undoubtedly been unsatisfactory. As a minimum, six weeks elapse between the filing of the application and the decision of the case.¹ In a number of cases more than a year has elapsed between the initial hearing and the decision. In some cases the delays are attributable to adjournments in order to permit the obtaining of more evidence.² In other cases, delays have been caused by an endeavor to get the parties to settle the questions in dispute. When cases are appealed, there are further delays. While one case has been decided on appeal within two months after the decision of the Commission, the usual period is from six months to one year.

Notwithstanding the assumption in 1887, that giving a *locus standi* to governing bodies and to traders' associations would cause much litigation, the number of complaints is not great. In the period 1889-1903 there have been, on the average, fifty applications a year; but many of these have been of minor importance. In the same period there have been on the average twenty-three decisions a year. But here there are many cases where one decision covers a group of identical cases.³ Complaint has been made of the small number of days on which the Commission sits. In the nine years, 1896-1904, the average period the Commission has sat annually as a court is thirty-two days. This, it is true, is exclusive of the days when the Commission has sat to consider applications for sanctioning working agreements between railways, the time taken up in connection with the administrative duties of the Commission, and the days on which

¹The Rules of Procedure of the Commission allow twenty-one days after the filing of the application for the filing of replies.

²E.g., the important case of *Spillers & Bakers, etc.*, was heard first December 9 and 10, 1903. It was then adjourned for further evidence, and was decided in July, 1904.

³See Table I.

the registrar of the Commission has inquired into damages and interlocutory proceedings which would otherwise come before the commissioners acting as a court. Of these no record is kept; but, after making all allowance, it is apparent that the Commission is not overworked. It is apparent, however, as has been recognized by the traders themselves, that the mere enumeration of the number of days on which the Commission has sat is no criterion of its usefulness.¹

The Commission is criticised on account of its expense. This criticism is, however, directed only to a slight extent against its cost of maintenance.² It is the expense of obtaining a decision that the critics have in mind. In recommending a limitation of the right of appeal, the committee of 1882 intended to limit expense. By providing for the intervention of the Board of Trade in various matters, the legislation of 1888 hoped that the expense of proceedings might be kept down. The attempt of the legislation of 1894 to lessen expense, by providing that costs should not be granted by the Commission, except in cases where the claim or the defence is frivolous or vexatious, was intended to obviate the burden of the fees of the railway lawyers falling on the trader, when defeated in a case. The admittedly high expenses are not attributable to the fees of the Commission, which are moderate,³ but to the development of a technically equipped Railway Commission Bar. It was early seen that the necessary prominence of the lawyers employed would make the process relatively expensive. The same conditions existed in connection with the Commission

¹ In this connection see the statement of Sir B. Samuelson, who was very active, on the traders' side, in the steps leading up to the legislation of 1888. Hansard, 1888, third series, vol. 278, p. 1887.

² In 1903 the cost of maintenance of the Commission amounted to £6,497.

³ See Railway and Canal Commission Procedure, Schedule III., Woodfall, *op. cit.* See also *Senate Committee on Interstate Commerce, ut supra*, vol. v., Appendix B, p. 220. The Commission fees in rate cases, as a maximum, do not exceed £5.

of 1873. In the body of lawyers found practising before the Commission are many whose names are prominent in the Parliamentary bar,—a practice whose fees are high. The legal work before the Commission has tended to fall into the hands of a relatively small number of practitioners.¹ Prior to 1894 it was the practice to allow costs for two lawyers, unless when some especially technical matter was involved.² Since 1894 there have been, on the average, two lawyers on each side in the traders' cases. Under these conditions the expense, in a case contested before the Commission, runs from £150 to £200 a day. The individual trader is able to lessen his expense where, as in the sidings' rent cases, a group of traders bring action on a common set of facts. Only in one case has a rate matter been presented before the Commission by the complainant himself; and he was unsuccessful. The judicial members of the Commission are opposed to the complainants appearing in person. While it is true that in one case, which was settled before trial, the total court costs to the complainant were £1; and these, with his other expenses, were reimbursed to him by the railway, it is apparent that those who are aggrieved in small matters cannot afford to come before the Commission.³ There have not been the migratory sessions of the Commission which the traders favor. The sessions are held in the capital cities of the countries concerned. It is cheaper to have the cases taken to the tech-

¹In the 58 traders' cases covered by the reported decisions down to 1902, 68 lawyers took part. Mr. J. H. Balfour Browne, K.C., who is the dean of the traders' legal forces, appeared in 41 cases; Mr. C. A. Cripps, in 36; Mr. E. Moon, in 31. In all there were 32 lawyers who appeared in more than three cases. Eight of these appeared in more than ten cases each. The leaders have not practised exclusively on one side. For example, Mr. C. A. Cripps, who has appeared in 30 cases for the railways, has appeared in 6 cases on the traders' side.

²The registrar is the taxing officer of the Commission. See appeal from his decision in this connection in *Glamorganshire County Council v. Great Western Ry.*, 9 Ry. and Canal Traffic Cases, 1.

³See evidence of T. Middleton before the Royal Commission on Agricultural Depression, 1897, answer to question 2361.

nically equipped lawyers in the capital cities than to have these come to the cases in local centres. If the case involves any matter of considerable moment, the contest has to be carried on against the Railway Association. This being so, the complaints have to be fought out by firms, groups of traders, trade associations, Chambers of Commerce, local governing bodies.¹ The cost of a suit before the Commission is, under these conditions, about the same as before any other high court.²

In view of the expense attaching to suits before the Commission, it has been urged that the power possessed by the Board of Trade under the Act of 1873 to institute proceedings before the Railway Commission should be utilized. While the railways would not object to the Board of Trade presenting before the Commission matters arising under the conciliation procedure of the Board, where its decisions have not been accepted by the railways, it has been held that this would interfere with the efficiency of the conciliation clause. The government has held that to make a government department public prosecutor in cases before the Railway Commission would savor rather of persecution than of prosecution.³ One exception has been made to this general rule. In 1899 the Irish Department of Agriculture was empowered in its act of organization to present rate grievances before the Commission at the public expense. So far there has been only one such case, in 1902. In this the Board of Agriculture was successful.

The Associated Chambers of Commerce urged in March,

¹ One of the most interesting trade associations is the Mansion House Association, founded in 1889. It represented, before the Board of Trade in 1899-00, 309 public and local authorities, 174 commercial and agricultural organizations, besides a large number of individuals.

² While the limitation of appeal reduces the expense, the powers of the Court of Appeal to grant costs in Commission cases is not affected by the legislation of 1894.

³ Hansard, 1883, third series, vol. 278, p. 1901, statement of Hon. Joseph Chamberlain.

1904, that, with a view to cheapness and expedition, the local county courts should be used in cases between the railways and the traders. This suggestion is especially intended to cover the case of the small trader. In one form or another it has been under discussion since the early nineties. Cases affecting railways already come before the county courts from time to time.¹ While the county court method of procedure might work fairly well in local matters, it is apparent that this procedure is unfitted for matters of more general interest. There would also be a defect in that the way is open for a lack of expedition. Appeals may be taken on points of law or equity from the decisions of the county court. In the consideration of these appeals the high courts are empowered to draw inferences of facts. Exceedingly small matters are appealed at present. In 1904 one appeal was concerned with an alleged overcharge of 11½d. on a railway journey.² It has been suggested, however, that the cost of appeals under the proposed jurisdiction should, where the appeal is by a railway, be borne by the railway.³

When the Act of 1894 was under discussion, it was claimed that the legislation was defective, in that it had not restored the right possessed prior to 1888 to challenge the reasonableness of all rates. To the proposition to confer rate-making power on the Commission the government was strongly opposed. It considered that "to ask the Railway Commission, or any tribunal, to consider what is a reasonable rate would be to give them no firm ground on which they could stand."⁴ Back of all the criticism

¹*E.g.*, cases arising under Section 5 of the Railway Rates and Charges Act of 1891. This section is concerned with special charges that may be made by railways for special services.

²*Aakton v. Lanc. & Yorkshire Ry.*, 2 K. B. 1904, 313.

³*Waghorn and Stevens, op. cit.*, p. 65.

⁴Statement of Hon. James Bryce, president of the Board of Trade, in an interview with the deputation on railway rates and charges, June 15, 1894, *Railway Times*, June 23, 1894.

directed by the trader against the Commission there is in reality a desire that the rate-making power should be exercised. But, while the desire exists, there is a lack of unanimity as to the means to use to accomplish this. In this uncertainty some are looking to the Board of Trade.

The Board of Trade was given jurisdiction, under the Act of 1888, to deal with rate grievances through a conciliation process modelled on that contained in the Act to regulate Commerce. It is also empowered to attempt to settle complaints about unreasonable rates. The operation of the Board of Trade under its conciliation jurisdiction is recognized as having met with a considerable degree of success.¹ Agreements have been obtained in about one-third of the cases brought before it. By the explanations it obtains from the railways the board is also able to settle incipient rate grievances. The process is simple and inexpensive. When a complaint is made, the railway is communicated with, so that a statement of its position may be obtained. If the matter cannot be settled by correspondence, an attempt is made to arrange a meeting at the Board of Trade between the complainant and a railway representative. Here the matter is taken up in an informal manner. Isolated cases have dragged on a year without a decision, but normally some settlement is obtained much more promptly. Complaints varying from an overcharge of 2*d.* on a lawn-mower to questions concerned with preferential rates come before the board. In 1900 it was able to obtain a reduction in distributive rates affecting five hundred towns in England and in Ireland. Since 1888 over eleven hundred cases have been brought before the board.² Approxi-

¹ This is admitted by so strong an advocate of the rate-making power as Mr. W. A. Hunter. See an article of his, "Railway Rates and the Common Weal," *New Review*, vol. viii. p. 341.

² This is exclusive of over 1,900 unreasonable rate complaints dealt with by a special official prior to 1899.

mately one-half of these were presented in the period 1899-1903. The following summary shows the result of the more important applications:—

PRINCIPAL APPLICATIONS, 1899-1903.	Seventh Report.		Eighth Report.	
	Settled.	Unsuccessful.	Settled.	Unsuccessful.
Classification	4	9	2	12
Delays in conveyances, facilities, etc.	15	15	4	5
Facilities and tolls on canals	2	4	—	—
Rates, differential	9	18	—	10
Rates, preferential	—	2	—	—
Rates, through rates obtained	2	7	2	4
Rates, through rates, reduction of	2	2	—	1
Rates, unreasonable, reduction of	37	82	18	29
Rebate, cartage	6	3	3	2
Rebate, station terminals	1	—	—	—

There were, then, under these headings satisfactory agreements in about one-fifth of the applications made.

While the conciliation work of the Board of Trade has met with a fair degree of success in smaller matters, it has failed when larger matters have had to be dealt with. In Pidcock's case, which later came to the Railway Commission, there was involved the right of the complainant to receive rebates in respect of terminal services not performed at his sidings. The matter dragged on for seventeen months, and finally the railways stated they would take the matter to the Commission, although in the opinion of the Board of Trade the "matter was of no such intricacy or difficulty as to make the arbitrament of a more elaborate tribunal essential to a just decision."¹ The railways will not recognize the conciliation procedure in any matter which involves legal right. With a view to simplifying procedure the Act of 1888 provides that, when a trader desires to obtain a through rate, a prelim-

¹ *Fourth Report of the Board of Trade of Proceedings under Section 31 of the Railway and Canal Traffic Act, 1888, p. 6.*

inary hearing before the Board of Trade is necessary. However, since the determination of the Board on such a matter has no legal effect, the preliminary hearing has become simply a perfunctory matter. The Board of Trade is unwilling to express an opinion; while the railways are unwilling to take any position that may be used against them before the Commission.

When the rate increases of 1893 were under discussion, the Mansion House Association proposed, on behalf of the traders, to accept the decision of the Board of Trade on these rates if the railways would also pledge themselves to accept the decision. But to this the railways would not agree. To the attempt to give the Board of Trade power over rates the railways are strongly opposed. This position is also supported by the Board of Trade itself. It has constantly claimed that the strength of the conciliation procedure of the board is wholly attributable to lack of compelling power. It is averse to any increased jurisdiction over rates being conferred upon it. It also believes that, if a new rate tribunal is organized, it should, while equipped with a commanding *personnel*, be of the "advisory" type.

VI.

Table I. indicates that, from the traders' standpoint, the most important matters brought before the Commission are sidings' rent charges, preference, unreasonable rates, charges for services at sidings, and reasonable facilities. Attention has already been directed to the importance of sidings' traffic in British railway working. For many years the small traders engaged in retailing coal had been using the trucks as storage warehouses. The railways objected to their sidings being crowded with loaded trucks. The colliery owners, to whom the rolling stock belonged,

also objected. Formerly the railways had charged demurrage charges based on the average time a truck was detained on a siding. In 1895 the railways decided to charge demurrage based on the actual time a truck was detained on a siding over and above the time necessary to unload it. Since 1895 many applications dealing with this arrangement have been brought before the Commission. Some have come up under the heading of legality of rates, others under the heading of unreasonable rates. The complaints in regard to charges for services at sidings are attributable to the fact, already sufficiently explained, that in the English railway system there are various special charges over and above the conveyance rate. As is indicated in Table I., 779 applications have been made to the Commission.

The preventive effect of the Commission is in part measured by the details given in Table II. A special example will make the preventive effect clearer. In 1902 some forty-seven cases, which were brought before the Commission alleging that the Midland Railway was unduly preferring a prominent colliery, such favor being to the detriment of the complainants, were settled before trial. In all, 219 cases have been settled or withdrawn. Formal action has been taken in 346 applications,¹ leaving approximately one-third of the applications concerning which there is no further record.

There have been only three cases in the history of the Commission in which anything savoring of a secret rebate has been brought before it. The work of the Commission, in so far as rates are concerned, has been almost entirely concerned with freight traffic. The Act of 1888 makes no direct provision for action in regard to passenger rates.

¹This includes a large number of group decisions; *i.e.*, where one decision covers identical facts in a set of cases, consent decisions, cases where a settlement arrived at by the parties is embodied in an order of the Commission, dismissal of applications, etc.

It has, however, been settled in decisions arising out of the Commission's action that it has, as an incident of a through rate arrangement, power to order through booking (ticketing) of passengers. It has also power to deal with passenger facilities under the question of "reasonable facilities." Of the rate cases formally argued before the Commission the traders have won not far from three-fifths. The tendency of the Commission has been to give compromise decisions. Not only have there been compromises as between the contending parties, there have been compromises as between the opinions of the commissioners themselves. In the Rickett, Smith case, in which the point involved was an increase in rates, Justice Collins thought all the increase was justifiable, Lord Cobham thought none of the increase was justifiable, Sir Frederick Peel occupied an intermediate position, and his opinion prevailed. Both in the traders' cases and in the cases between railways the Commission has been attempting to have the parties arrive at satisfactory settlements, without final action on its part. In some cases, when the parties have agreed, the Commission, in accepting the agreement, has incorporated it in its final order.

The presence of a judge on the Commission has meant a strict constructionist point of view in regard to the law. In general, powers have not been implied. Early in the history of the Commission Justice Wills said nothing could be more mischievous than to strain legislation to cover facts that had been left out of it. In 1892 the same judge, in speaking of a statute, said, "The legislature had reasons of its own, good, bad, or indifferent, which have nothing to do with me." In one case, however, where a railway had closed a branch railway, and pulled down the railway station, the Commission required, with much hesitation on the part of the judicial member, that the railway should give the reasonable facilities asked for;

and this of necessity involved the rebuilding of the railway station. This implication from the law of 1854 was promptly overruled.¹

Undoubtedly the presence of a judge on the Commission has made the relations with the higher courts more harmonious than was the case with the Commission of 1873. There has not been that tendency, so conspicuous in the relations of the federal courts to the Interstate Commerce Commission, to regard the Commission as an amorphous interloper. In one case, it is true, the Scotch Court of Sessions claimed that, if a decision as to fact depended upon a conclusion in law, then there could be an appeal. This line of argument, which, if followed, would soon undermine the finality of the Commission's decisions on questions of fact, has not been adopted; and there has been a ready recognition by the courts of the finality of the Commission's decisions on questions of fact. The result of this is seen in the attitude of the courts to the decisions of the Commission. Down to 1904 there have been, as is indicated in Table III., thirty-eight appeals. The Commission has been overruled in four cases, while in two others it has been sustained in part and reversed in part. The decisions of the Commission in the traders' cases have more finality than in the cases between railways. While nine-tenths of the applications before the Commission have been concerned with traders' rights, there have been only eighteen appeals in the traders' cases; while there have been fifteen appeals in cases where railways alone or railways and dock companies have been concerned.

From the standpoint of the trader a question of importance is the willingness of the railway to obey the orders of the Commission without fighting the matter to the last ditch. While, on the whole, the railways have been loyal

¹ *Darlaston Local Board v. L. & N. W. Ry.*, 8 Ry. and Canal Traffic Cases, 216.

to the decisions of the Commission, examples may be found on both sides. In 1902 the railway reconsidered its first intention to appeal the Charrington, Sells case. The result was that a large number of cases, in which the same set of facts was involved, were settled out of court. The London & North-western, as a result of the decision in the first Corn Traders' case, gave up the attempt to compete for the traffic with which the case was concerned, and readjusted its rates accordingly. On the other hand, it was necessary, in the case which the Mansion House Association won from the same railway in 1896, to have supplementary proceedings before the Commission in 1897 before the cessation of some of the rates complained of was obtained. The involved uncertainties of English railway law have also played their part. The railways have been able, acting within the law, but depending upon legal, not commercial, conditions, to modify the redress given by the Commission. In 1889 a decision, under the undue preference clause, found that existing rates were interfering with the distributive business of the Irish town of Newry. Two years later complaint was made because one of the rates complained of had been raised. The railway successfully justified this, on the ground that the section of road, on which there was an increase of rate, was expensive to work on account of cost of gradients, etc. In 1900 the firm of Cowan & Sons, paper manufacturers, failed in an application to the Commission for a rebate on sidings' charges. In retaliation for this application the railway company, which for twenty-eight years had delivered coal at the private siding of the firm in question, refused any longer to deliver coal at the siding. While the railway was at the same time delivering coal at the sidings of adjacent competing firms, it delivered the coal for the Cowans at a near-by station, and they had to haul it back to their siding. The decision of the Commission

in favor of the Cowans was overruled. It was held that the arrangement between the railway and the trader in this case was a purely voluntary arrangement, creating no prescriptive rights against the railway. It was not till 1904 that legislation, bringing such sidings within the facilities clause of the Act of 1854, and thus supporting the Commission's decision, was passed.

The Commission, whenever there is an identity of facts,—*e.g.*, in many of the sidings' rent cases,—has dealt with cases in groups giving a decision which covers a set of cases. The unwillingness of the courts to give the decisions of the Commission a more general effect has assisted in tying the decisions down to the facts of a particular case. In October, 1901, the Commission decided that certain coal rates charged by a number of Scotch railways were unreasonable. The rates were discontinued, as regards the complainants, in December of that year. Three other traders, who were subjected to the same rates, but who had not been parties to the suit, later brought action in the courts for damages because the railways had continued to charge them the rates complained of. The court held, however, that the decision of the Commission had no general effect. Although the rates had been found unreasonable, the court would take no cognizance of this unless they were also illegal.¹

The functions committed to the Commission are extremely diverse. While it has, with evident innuendo, been called the Traders' Court, it has, in addition to dealing with rate matters, an extensive jurisdiction in regard to arbitration of matters referred to it by the Board of Trade; *e.g.*, differences between railways involving such matters as running rights, number of trains under a running arrangement, arrangements in regard to connec-

¹ *Lanarkshire Steel Co., Ltd. v. Caledonian Ry.*, 11 Scots Law Times Reports, 407, 408. A preliminary decision of the court had held that the Commission's decision was of general effect. *Ibid.* 225.

tion in a through train service over a connecting line, division of expenses between the owning and the controlling company, differences between the Postmaster-General and railways in regard to postal payments, questions arising in connection with the introduction of improved brakes, complaints in regard to the water supply of London. In addition it serves as a court of appeal from the Board of Trade in cases arising out of the rules made by the Board of Trade under the railway labor acts, and has alternative jurisdiction in the workmen's trains applications. In addition to jurisdiction under special acts the Commission exercises functions finding their legal sanction in some nineteen general acts.

Not only are there complaints at present in regard to preferences on imported products, there are also complaints concerning the rates and facilities given home products. Complaint is especially active in the case of Irish agricultural products. Comparisons, unfavorable to domestic rates, are constantly being made with foreign rates. The question of shipments on "owner's risk" rates gives rise to many complaints. The criticism of the Commission on Agriculture of 1897, that the rate regulative legislation has not given clear effect "to the intentions of Parliament,"¹ is general among the traders. That the Commission has not accomplished much that was expected of it is a patent fact. Its procedure has not met the case of the small trader. At the same time the rate regulative procedure that accomplishes all that is expected of it is not absent from England alone. The Commission, it must be remembered, was organized, not to reduce rates or to intervene actively in matters of rate regulation, but as a court to settle differences. As a court, it has performed its functions. While there was, at the outset, some tendency on the part of the judi-

¹ *Final Report*, paragraph 526.

cial members to look at matters from a legal standpoint rather than from the standpoint of facts, the tendency has been, in more recent years, to meet the conditions rather than to bend the conditions to meet preconceived theories. On questions of railway law the Commission has been, on the whole, more in touch with the facts than the ordinary law courts. While the expense attaching to litigation before the Commission is readily apparent, it may be queried in how far there is a justification for expecting either a cheap settlement or a settlement, at the public expense, of important business matters. So far as England is concerned, the attempts to obtain cheap settlements, in the face of the existing involved body of railway law, would mean, if successful, results of little worth.

VII.

In the United States the Federal courts have recognized the debt of the Act to regulate Commerce to the English regulative legislation. But, when comparison is made of the constitution and functions of the English Commission with those of the Interstate Commission, differences at once appear.

The English Commission is a court. The American Commission has the functions of a referee or special commissioner. The former has final decision in regard to fact and a limitation on the right of appeal, with the result that appealed cases are normally settled within a year. The latter has no finality of decision in regard to fact, and appeals from its decisions have taken from two to nine years to decide. While the English Commission has been overruled in the period ending 1904, wholly or partly, in six out of thirty-eight appeals, the American Commission has, in approximately the same period, been overruled in twenty-nine out of thirty-eight

appeals.¹ While the Interstate Commerce Commission has, practically from the outset, claimed, as a necessary implication from the language of its enabling statute, an amendatory rate-making power, the English Commission, organized as a court, has, almost without exception, kept aloof from making implications extending its jurisdiction, and has denied any intention to exercise a rate-making power. While the members of the American Commission hold on a limited tenure and the Commission is a bi-partisan organization, the tenure of the lay commissioners in the English Commission is for good conduct, there is a pension on retirement, no question of bi-partisan organization enters in, and the provision is made that one of the commissioners shall have technical knowledge of railway affairs. The judicial members of the English Commission are assigned to it for five years; but during the period they are not engaged in the Commission work they perform their regular duties as judges of the high court.

In the details of the regulative policy which has developed under the Commissions, resemblances and differences appear.² The English regulative policy is not in harmony with that of the United States in regard to the extent to which competition is to be considered as a justification of rate anomalies. While the English legislation eliminates competition in the case of import rates, the American position, as established in the Import Rate case, states that competition is to be considered as affecting both import rates and domestic rates. In the case of domestic rates the English Commission at first would not recognize competition as the justification of an¹ anomalously low rate-basis unless a well-defined "public interest" was thereby

¹See Table III. See also Appendix D, p. 331, vol. v., *Hearings of Committee on Interstate Commerce, etc.*, 1906.

²There is no recognition, in the working of the English Commission, of results arrived at in the regulative policy of the United States.

served. Later it accepted the same view as was set forth in the United States in the Alabama Midland case; namely, that competition is one of the matters which may lawfully be considered in making rates. The grievance of secret rebates, one of the central evils in the United States, is practically non-existent in England. There is no provision other than that of the undue preference clause to cover such a grievance. In both countries the principle that undue preference is a question of fact has been accepted. While the United States has singled out a particular form of preference for special treatment under the "long and short haul" clause, England has allowed more elasticity by placing the matter under a general clause. On the question of the justifiability of granting wholesale rates in respect of quantities larger than carload lots, the American decisions have been contradictory. The lower courts have shown a tendency to accept the decision in *Nicholson's case*, but in the *Party Rate case* the Supreme Court established as the law that a discrimination in respect of quantity, even if allowed to all doing the same amount of business, is to be considered from the standpoint of public policy and the effect of such an arrangement upon trade competition.¹ In so deciding there has been accepted as a principle what is, so far, only a tendency in the English regulative policy.

The dissimilarities of the matters dealt with by the two Commissions will be seen by referring to Table I. The items common to the two Commissions are legality of rates, unreasonable rates, reasonable facilities, and undue preference.² In all, about one-half of the applications made

¹ *J. C. C. v. Baltimore & Ohio Rd. Co.*, 145 U. S. 263. This upholds the general position taken at an earlier time by the Interstate Commerce Commission in *Providence Coal Co. v. Providence & Worcester R. Co.*, 1 I. C. C. Decisions, 363. See also Judson, *The Law of Interstate Commerce and its Federal Regulation*, p. 194.

² I omit sidings' rent (demurrage) charges, because the conditions under which these arise in England differ entirely from those existing in the United States.

to the English Commission are concerned with matters of a kind coming before the American Commission.

The English Commission has used two sets of rate principles: competition as an important factor in differential rates, export rates, and in general in the home side of undue preference; cost of service in regard to preferential rates, and unreasonable rates. This has been in great degree attributable to the legislation. The traders have desired free trade in exports, not in imports. Admitting that there has been a certain *judicial* bias in favor of the cost of service principle, it is at the same time apparent that legislation, like that of 1894, which makes a past rate the *prima facie* criterion of reasonableness rules out the possibility of considering present competition. The defects of the legislation of 1894 are its own. The Commission has made the legislation less unworkable than could have been expected.

A considerable part of the desire to control and lower actual rates in England pertains to that hysterical belief in England's industrial decadence which has found some favor in recent years. A considerable part of the criticism arises from the endeavor to prove, on the basis of foreign statistics not properly comparable with English statistics, that English rates are unduly high. Some rearrangements in the Commission's machinery would, however, effect improvements. An arrangement whereby, when a question of principle is established in a decision of the Commission as distinct from a mere finding on facts, the enforcement should be placed in the hands of the Board of Trade instead of leaving it as a question of possible dispute to be fought out in individual cases, would effect an improvement. A closer articulation of the conciliation procedure of the Board of Trade with the process of the Commission, whereby the findings of the former would have a status before the latter, would also be expedient.

The Commission is becoming more and more a technical court, whose decisions are modified by an attempt to obtain settlements rather than legal decisions. Notwithstanding the criticism directed against it, it is difficult to see how, considering the peculiar geographical, industrial, and railway conditions it has faced, the Commission could have accomplished more than it has done.

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TABLE I.
SUBJECT-MATTER OF APPLICATIONS
DEALT WITH BY THE COMMISSION, 1889-1903.¹

	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
Board of Trade (Prevention of Accidents Act, 1900)	-	-	-	-	-	-	-	-	-	-	-	-	-	6	26
Classification	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Facilities, Reasonable	3	8	3	3	1	6	-	1	4	2	2	5	4	4	3
Postmaster-General, Applications concerning	-	-	-	-	-	-	-	-	-	2	2	2	-	-	-
Preference, Undue	3	4	5	4	5	5	4	6	-	1	6	3	97	10	8
Rates, Distinction of	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Rates, Legality of	2	2	-	1	-	2	13	2	3	3	6	2	1	-	-
Rates, Through	-	-	-	-	-	1	63	10	2	24	-	-	3	-	1
Rates, Unreasonable	-	-	-	-	-	-	6	6	4	3	25	3	108	-	91
Sidings, rent (demurrage)	-	-	-	-	-	-	1	3	-	4	9	8	6	-	3
Sidings, rebate from sidings' charge	-	-	-	-	-	1	6	3	5	1	2	-	-	23	24
Sidings, services on, charges for	-	-	-	-	-	-	1	4	1	-	-	-	-	-	-
Terminal charges	-	1	-	-	-	1	1	1	1	-	-	-	-	-	-
Trunks, rebates because not supplied	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
Railways, differences under special acts, etc.	3	10	1	2	4	5	3	7	6	3	3	4	2	1	2
Railways, working agreements approved	3	2	5	5	2	-	2	2	2	-	1	2	3	1	-
Workmen's trains applications	-	-	-	1	-	-	-	-	-	23	1	3	-	1	-
Water Act, Metropolitan (1897), applications	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-
Miscellaneous	-	-	1	2	1	2	3	3	1	2	-	1	1	1	1

¹ In various cases a number of points are dealt with. In constructing the table, I have selected the most important point in each case.

TABLE II.

CASES WITHDRAWN OR SETTLED EITHER

IN COURT OR OUTSIDE, 1889-1903.¹

	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
Facilities, Reasonable	1	-	-	2	-	1	1	-	2	2	-	4	1	3	2
Postmaster-General, Applications concerning	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Preference, Undue	-	-	1	-	2	2	2	-	2	2	2	-	-	2	15
Rates, Legality of	-	1	-	-	-	-	-	-	3	-	-	-	-	-	-
Rates, Through	-	-	-	-	-	-	-	1	2	-	1	1	-	1	-
Rates, Unreasonable	-	-	-	-	-	-	2	16	20	19	8	1	4	30	-
Sidings, rent (demurrage)	-	-	-	-	-	-	-	2	2	-	2	-	-	1	-
Sidings, rebate from sidings' charge	-	-	-	-	-	-	1	2	1	3	2	3	1	1	1
Sidings, services on, charges for	-	-	-	-	-	-	-	1	2	-	-	1	-	-	-
Railways, differences under special acts, etc.	-	-	-	-	-	-	-	2	-	2	-	1	-	-	-
Workmen's trains applications	-	-	1	-	1	1	-	2	-	2	1	3	1	-	-
Water Act, Metropolitan (1897), applications	-	-	-	-	-	-	-	-	-	12	1	1	-	-	-
Miscellaneous	-	-	-	-	-	2	-	2	1	-	-	1	1	-	-

¹ See foot-note to Table I.

TABLE III.
CASES APPEALED FROM THE
RAILWAY AND CANAL COMMISSION, 1889-1904.¹

Year.	Name of Case.	Appealed by	Point involved in Appeal.	Result.
1890	Taff Vale Ry. Co. v. Barry Dock & Ry. Co.	defendant.	Differences under special act.	Com. sustained.
1891	Sowerby & Co. v. Great Western Ry. Co.	plaintiff.	Terminal charges.	"
1891	Rhymney Ry. Co. v. Butte Dock Co.	"	Facilities between parties.	"
1892	Pickering Phosphate & Co. v. L. & N. W. Ry. Co. et al.	"	Undue preference.	"
1892	Liverpool Corn Traders' Ass'n. v. Gt. W'm. Ry.	"	Undue preference.	"
1894	North-eastern Ry. v. Scarborough & Whitby Ry.	defendant.	Construction of working agreement.	"
1894	Darlington Local Board v. L. & N. W. Ry.	"	Reasonable facilities.	overruled.
1895	Manston House Ass'n v. Gt. W'm. Ry.	"	Unreasonable rates.	sustained.
1896	Greenwood & Sons v. Lanc. & Yorkshire Ry.	"	Rebate on sidings' charges.	"
1896	Watson, Todd & Co. v. Midland Ry. & L. & N. W. Ry.	plaintiff.	Terminal rebates.	"
1896	Midland Ry. v. L. & N. W. Ry.	defendant.	Unreasonable rates.	"
1896	Didcot, N. & S. Ry. v. Gt. W'm. Ry. & L. & S. W. Ry.	"	Through booking of passengers.	"
1897	North-eastern Ry. v. North British Ry.	"	Running rights.	"
1898	Gt. Northern Ry. v. N. E. Ry. & N. B. Ry.	both parties.	Rebate on sidings' charges.	"
1899	Huntingdonshire County Council v. Simpson	defendant.	Differences under special act.	"
1899	Postmaster-General v. Corp'n of London	"	Reasonable facilities.	"
1900	Postmaster-General v. Corp'n of Glasgow	"	Telegraph connections.	"
1900	Fourth Bridge v. N. B. Ry. & Gt. N. Ry. et al.	plaintiff.	Through rates.	"
1900	L. T. & S. Ry. v. Gt. Eastern Ry. (No. 2)	"	Differences between railways.	overruled.
1901	Cowan & Sons v. North British Ry. (No. 1)	"	Rebate on sidings' charges.	sustained.
1901	Black & Sons v. Cal. Ry. N. B. Ry. & G. & S. W. Ry.	defendants.	Application for details of plaintiffs profits to use in suit.	"
1901	Cowan & Sons v. North British Ry. (No. 3)	defendant.	Reasonable facilities.	"
1901	Huntington et al. v. Lanc. & Yorkshire Ry.	defendant.	Ownership of a siding.	{ sustained; ²
1901	Rhymney Ry. v. Great Western Ry.	plaintiff.	Differences between parties.	overruled; ²
1901	Gt. Western Ry. v. Metropolitan Ry.	defendant.	Differences between parties.	sustained.
1902	Crompton & Co. v. Lanc. & Yorkshire Ry.	"	Rebate on sidings' charge.	"
1902	Vickers, Sons & Maxim v. Midland Ry. et al.	"	Rebate on sidings' charge.	{ sustained; ²
1902	London & India Dock Co. v. Gt. Eastern Ry. & Midland Ry.	defendants.	Power to propose through rate.	overruled; ²
1902	Lanc. British & Birmingham Co. v. Lanc. & Yorkshire Ry.	"	Connection of siding with railway.	"
1902	Gt. Western Ry. v. Metropolitan Ry.	"	Difference between parties.	sustained. ²
1902	Mild & Denbigh J'm. Ry. v. L. & N. W. Ry.	plaintiff.	Undue preference.	"
1902	Abram Coal Co. v. Gt. Central Ry.	defendant.	Refusal of proposed through rate.	"
1903	London & India Dock v. Midland Ry. & Gt. Eastern Ry.	plaintiff.	Compensation for mail.	"
1903	Great Western Ry. v. Postmaster-General	"	Undue preference.	"
1903	Achers, Whitley & Co. v. Gt. Central Ry.	defendant.	Running rights.	"
1904	North British Ry. v. Caledonian Ry.	"	Point of law.	"
1904	Lancashire & Yorkshire Ry. v. Wright	plaintiff.	"	overruled.

¹The official report of cases for 1904 is not yet available. ²In part.

TYPES OF AMERICAN LABOR UNIONS: THE 'LONGSHOREMEN OF THE GREAT LAKES.

BEGINNING in 1892 as a convention of delegates from ten local unions of lumber handlers from Ashland to Buffalo, under the name of the "National 'Longshoremen's Association of the United States"; changing its name to "International" in 1895 to take in Canada; changing again in 1902 to "International 'Longshoremen, Marine and Transport Workers' Association,"—this organization now includes forty different occupations, and claims 100,000 members, of whom one-half are on the Great Lakes. As stated in its Directory, it

embraces in its membership and grants charters to Loaders and Unloaders of all Vessels and Ships; Marine and Warehouse Package Freight Handlers; Grain Elevator Employees; Dock and Marine Engineers; Dock Hoisters, Firemen, and Marine Repairmen; Marine Firemen, Oilers and Water Tenders; Licensed Pilots and Tugmen; Tug Firemen and Linemen; Marine Divers, Helpers, Tenders, and Steam Pump Operators; Steam Shovel and Dredge Engineers; Drill Boat Workers; Dredge Firemen and Laborers on Dredge Scows; Marine Pile Drivers; Lumber Inspectors, Tallymen, and Lumber Handlers; Top Dockmen; Cotton and Tobacco Screwmen; General Cargo Dock Laborers; Pool Deck Hands and Fishermen,—along the Great Lakes, Rivers, and Seacoasts in the United States, Canada, Central and South America, and new United States possessions.

At one time the organization claimed railway freight handlers, saw-mill workers, and all men employed in lumber yards; but it has receded from these claims. On the other hand, it is now organizing the pilots and mates on the lake steamers, and has demanded the revocation of the charter of the Seamen's Union.¹ The wages

¹ *Proceedings, Fourteenth Annual Convention, 1905, p. 236.*

and salaries of its members range from those of laborers at 22 cents an hour to those of divers at \$10 or \$15 and, in some instances, \$25 a day, and tug-boat captains at \$165 a month and board. In thus reaching out for all employees engaged in water transportation, the Directory says:—

The business of handling transportation is now unified. It presents a distinct branch of commerce to which has been applied all the known scientific principles of the organization of capital and labor.

I.

An account of the lumber handling "locals" will give a clew to the other locals. They are the oldest, those at Bay City and Saginaw running back to 1870, and the one at Chicago to 1877. The Chicago and Detroit locals have furnished the president, D. C. Keefe, and the secretary, H. C. Barter, whose experience and policies have guided the International throughout its history. The aim of the lumber locals from the beginning has been to become co-operative contractors. In their first preamble they say,—

Having proved through experience that the system of loading and unloading boats by individual jobbers is one that robs our labor of its wages, we have determined to use every legitimate means in our power to suppress it, and to give every man an equal opportunity to secure work and receive the profits of his labor.

And the "Rules for Locals" declare¹ "all Locals are requested to endeavor to abolish the stevedore system by taking the work themselves directly." This object has been kept in the front at all times, and is the key to an understanding of much that the union has done and is trying to do. In 1905 the president of the union ad-

¹Section 11.

dressed the convention of Lake Carriers on this subject, as follows:¹—

A year ago we urged your co-operation to assist us in bringing about the abolition of the stevedore system in connection with the handling of grain at Chicago, in which I am pleased to say that our efforts were quite successful, and since then the grain has been handled to the entire satisfaction of all concerned. To my mind there can be no suitable apology offered for the further continuation of the obnoxious practice anywhere. We stand ready and willing to furnish a guarantee that we will do all the work that properly belongs to our organization to the entire satisfaction of the Lake Carriers and employers generally. . . . The system is a reflection on the intelligence of the American worker, maintained by the employer, where the employee is compelled to pay tribute to a drone for the privilege of working. We again pray your honorable body to unite with us in bringing about the complete abolition of this unjust system.

The stevedore was usually a labor contractor without capital. He furnished the men for loading or unloading the boats on contracts made with the captains or owners. At the Gulf ports the stevedores have formed associations for regulating charges; but on the Lakes they were usually competitors. Often they were saloon-keepers and ward politicians, or partners of such; and the conditions on which they hired men included patronage of the saloon and political errands. The men "bunked" in the saloon in order to be ready when a boat arrived, and they received their pay in the saloon.

The co-operative system, however, is not practicable as a substitute for the stevedore except on a piece-work basis. For example, in the loading of lumber on the upper lakes the conditions vary greatly. In some cases lumber is run down through chutes; and, where it is taken from the docks, it is brought from different parts, so that it is impossible to agree in advance upon a rate

¹ *Proceedings, Fourteenth Annual Convention*, p. 34.

per thousand feet. At 50 cents per hour in wages the cost to the owner varies from 23 cents to 90 cents per thousand feet. But the unloading of lumber is uniform. A man in the boat passes the lumber to a man opposite on the dock, and it is piled one tier in depth. The prices paid by the vessel owner have always been made on a piece-rate, both to the stevedore when he hired the men by the hour and to the union when it took the contract. In the latter case the local union makes a contract for the season with the vessel owner, or the owners' or dealers' association, containing a scale of prices, beginning, say, "white pine, 1 inch, $1\frac{1}{2}$ inch, and $1\frac{1}{2}$ inch, No. 3 and better, 10 feet and over, at 33 cents per M.," and so on for different sizes and grades. To do the work, the union distributes its members in gangs. The Cleveland local, No. 3, with 200 members, has 8 gangs of 25 men each. The Buffalo local has 36 men in a gang. One, two, or even three gangs may work on a boat, according to its size. Each gang has a stevedore or boss, or, in a German local, a *Gangführer*, who is elected by the union at the same time and for the same period as the other officers. This boss works with the men, if necessary; but, since the gang works in pairs and he is the odd man, his actual work consists in placing the men and overseeing the work. In any dealings between the captain or lumber dealer and the union, only the business agent or the gang boss has the right to speak. If any other member takes part, he is reported by the agent or boss at the next meeting of the union, and, if found guilty, is punished as the union sees fit. If he creates disturbances at the union office or at work, he may be suspended eight days, and on third offence expelled.¹ The business agent (*Geschäftsführer*) has charge of all the bosses and the gangs. The bosses take their orders from him. He makes a report

¹ *Constitution, Local No. 3, Cleveland*, p. 13.

at union headquarters two or three times a day of the boats to be unloaded, and especially sees to it that each gang gets its turn. If this equalizing of work cannot be done from week to week, it is evened up towards the close of the season, so that one man's earnings are very nearly the same as those of all other men in the union. In fact, the Cleveland union of Germans, on yearly earnings of \$487, has come within 75 cents of bringing the members out equal. Other locals earning from \$500 per member at Chicago to \$750 at Tonawanda have not been able to equalize so exactly. The business agent is fined and even ousted, if he does not keep the turns equalized.

The members of the gang are required to obey the gang boss and to be industrious and punctual, and they cannot leave the job until it is finished. If disobedient, the gang boss can lay them off. If they have a grievance, they must wait and bring it up in union meeting; and the gang boss can be fined or suspended if he is to blame. After the ship is unloaded, the boss collects the amount due from the captain, but he must take with him one member of the gang as a witness. He has the right to inspect the original bill of lading in order to verify the amount. He takes this to the union headquarters, and divides it equally with all the members of the gang. His own share is exactly the same as that of the other men in his gang, with 10 cents added for each boat to pay book-keeping expenses. Finally, he makes a report at the union meeting of the work done and the amounts received and distributed.

This is the method followed by all of the lumber unloading locals except those at Chicago, Milwaukee, and Michigan City. At these ports the gang bosses are selected by the captain or dealer. The latter method is the one also followed by the ore unloaders and the coal loaders,

even though they are paid by the ton. For a single year the ore shovellers at Cleveland tried the plan of electing their gang bosses, but their experience was discouraging. Factions were formed within the union, popular favorites and skilful wire-pullers secured election for themselves and their friends or relatives, and the union was weakened by dissensions. Since that trial the superintendent selects a gang boss from among the members of each gang, and the union, as well as the superintendent, is much better satisfied with the selections. But the union assigns the members to the respective gangs.

Local No. 205, ore shovellers, for example, of 200 members, is divided into eight gangs, of which two are Irish, one is German, one is Polish, one is Croatian, and three are mixed. But each gang is again divided into three sections of eight members each; and the sections of the mixed gangs are also based on race lines, one gang, for example, being composed of one Polish section, one German section, and one Irish section. Some sections have Irish and Germans together, but otherwise the races are usually separated. Each section works in one hatch of the boat, where they load the buckets by shovel, which then are hoisted by the engineer, or operator. A boat with nine hatches will have three gangs at work, the boss of each gang belonging to the nationality of the gang, except in the case of mixed gangs, where he is usually an Irishman. The gang boss has the same duties and is governed by the union in the same manner as when elected. The union can even secure his dismissal, but this must be done by lodging a grievance under the arbitration agreement with the association of carriers or dock managers, as the case may be. He is a member of the gang, and receives exactly the same share of the gang's earnings as the others. But he does not work in the hold. He watches the machinery, to see that it is in

working order and that repairs are promptly made. He watches the gang, to see that no one is shirking; and he has authority to lay off a member, subject to appeal to the union. The union generally has also its business agent to preserve the equality of turns among the gangs, to inspect bills of lading, and to verify the amounts due for unloading. Since the operating companies are large concerns and have the contracts for unloading many vessels, pay day is arranged once a week instead of collecting the amount due on each boat when it is finished, as is done by the lumber locals. Both the business agent and the gang bosses keep these accounts for their men.

Before the union was organized, the gangs were hired and made up by foremen to whom their earnings were paid and by whom they were distributed to the men, usually in a saloon kept by a friend or brother. Any complaint or grievance was followed by dismissal. No record could be kept of the amount of work done, except when the ore was loaded in cars and the weight was kindly furnished by the railroad yardman. It was, of course, suspected that the foreman pocketed a share of the proceeds. Now the men receive their pay in envelopes at the companies' offices, and the business agent is at hand to verify all accounts and take up all complaints or discrepancies with the superintendent. The foreman has disappeared, and in his place is the co-operative gang boss, sharing equally with his fellows. This change alone, apart from the increase in tonnage rates, has added materially to the earnings of the shovellers.

As already stated, the co-operative plan is impracticable where the men are paid by the hour, and the progress of improvement in hoisting machinery has substituted hourly wages for tonnage rates. Within the past five years automatic "grab buckets," or "clam shells," have been introduced, and are operated by the hoisting engineer.

The shoveller is not needed except to clean out the corners after the boat is practically unloaded. The ore is even pulled from the sides up to the hatches, where the buckets can reach it, by means of road shovels or great iron hoes operated by men in the hold with cables from a steam or electric winch. The men working in the holds with this automatic machinery get 28 cents an hour, but it is stipulated that they shall be paid during the time the machinery is working in the boat. This gives them two to four hours' full pay before the buckets get down deep enough for the road shovel or the hoe to begin. Already six of the eight gangs in Local No. 205 have been put on the automatic machines, leaving but two gangs on the tonnage or co-operative basis. On these machines their earnings are much less. At 14 cents a ton for shovelling they earn 55 to 60 cents an hour, or about \$600 a year, as against 28 cents an hour, or \$500 a year, on the hourly basis. On the other hand, however, the hoisters operating the machines have had an increase, since they joined the union, from \$60 or \$65 a month of 84 hours per week to \$80 or \$105 per month of 66 hours a week. The work of the shovelers is, of course, much harder than that of the laborers at the automatic buckets. On hot days they are naked to the waists. There is no period of waiting on full pay. But, notwithstanding the harder work, there is great dissatisfaction among the younger and stronger men if they are not permitted to work at shovelling on the old-style buckets at the higher earnings. The older and less active men seek the easier conditions with the lower earnings. There is also a wide difference among the nationalities. Very few American-born men are found in the holds. They have been promoted to hoisting. The supply is kept up by immigration. The Croatsians are large and powerful mountaineers with magnificent arms and legs,

who rejoice in the heavy work. At the other extreme are the Poles, a smaller and weaker race. The Germans are heavy workers, but they lack endurance, a weakness ascribed by the Irish to their diet. The Irish, being more Americanized than others, do not work as hard as they did. Yet all get the same pay on the same boat, sharing equally the tonnage receipts. The only criterion is willingness. The gang leaves to the older men the lighter work, such as signalling to the hoister; and the younger men do the heaviest work, such as running up the pile of ore and heaving and pulling the heavy buckets in place. It is an interesting fact that, in all instances, this system of gang piece-work which, in the clothing, machinery, and other trades, has developed into a sweating system, and is therefore vigorously opposed, is looked upon by the 'longshoremen with the greatest favor. Instead of stirring up jealousy and factions, it joins the union together in feelings of friendship and mutual aid, and is being extended wherever the union can do so. Doubtless, the secret of its success lies in the fact that the gangs do not compete with each other in making the contract prices whenever a boat comes to dock, but all are subject to the same uniform scale of prices made annually in advance by agreement.

The coal handlers also are paid by the ton. The work is mainly trimming the cargo in the hold of the vessel after the railroad car has been dumped on board by the hoister. The superintendent appoints the gang boss. Since each gang of sixteen or twenty men is hired for the season for a single dock, the earnings as between the gangs cannot be equalized. On one of the docks in Cleveland in one year the men earned \$1,200, while on another only \$600 were earned. However, as between members of the same gang earnings are equal. An automatic trimmer has recently been introduced, displacing the gang, and operated with

the aid of a few 'longshoremen at 33 cents an hour when actually at work. This has materially reduced their earnings.

Grain scoopers at Buffalo are paid by the thousand bushels on the gang-sharing plan, the bosses being selected from the union by the superintendent. At Chicago the grain elevator employees, with automatic machinery, are on hourly wages or monthly salaries.

II.

The 'Longshoremen's Association has entered into agreements annually with several associations of employers, especially the Lumber Carriers, the Lake Carriers, the Dock Managers, the Great Lakes Towing Company, and the Great Lakes Tug and Dredge Owners' Protective Association. The agreements with the Lumber Carriers were the first in point of time. Local agreements had been made at early dates by local unions and local associations of dealers or carriers, but the unions favored dealing only with individuals. The lumber carriers had formed associations at several times since 1883, but those associations were short-lived. The present Lumber Carriers' Association of the Great Lakes has had a continuous existence only since the year 1900. The weakness of earlier associations may be judged from the appeal made by the executive committee of one which was organized in 1898 to the convention of 'longshoremen at Cheboygan in July of that year.¹ The employers' committee, consisting of the president and the secretary of the association, in appearing before the convention, represented that the great interests, such as the railroads and railroad steamers, opposed to the 'longshoremen, were also attempting "to drive the lumber carriers to destruction by reducing the

¹*Proceedings, Seventh Annual Convention, 1898*, pp. 19, 20.

carrying charges below a point where they can live." The committee continued:—

Many of you remember the aid extended by your organisation, by one of your local unions, in keeping the carrying rates at living prices on the Great Lakes. This was several years ago at Bay City, which then made the rates on lumber.

The committee then stated the existing situation and their proposed remedy, as follows:—

The ship-owners or vesselmen, having carried lumber at a loss for the past two years, and witnessing the effect and success of your efforts and organization, decided last winter to follow your example,—organise for a living hire, and appeal to your body so closely identified with us for aid and assistance. At a meeting held in Detroit in February last the vessel-owners did succeed in effecting a voluntary association for the purpose of maintaining a uniform minimum rate which should cover the cost of transporting lumber and forest products. They succeeded in enlisting a large majority of all the vessels on the lakes. Unfortunately there were a few who did not come in. They threaten to disrupt our association, and we therefore, the Executive Committee of the Lumber Carriers' Association, come before your honorable body, asking and appealing for the co-operation which is necessary for our existence, for our success as well as yours. This assistance which we request is that you should either refuse to load boats not belonging to the association, or boats belonging to the association that cut rates, or impose a heavy fine, heavy enough to prevent such suicidal business or to drive them all into the association. This we recommend be done on the entire chain of lakes, or more especially the Lake Superior districts.

After promising the 'longshoremen an increase in wages if the Lumber Carriers' Association could be kept together during the season, the committee concluded:—

Whatever action you may take, it should be taken as soon as possible, for the reason that members and non-members are cutting the rates, and we fear that, if some action is not taken promptly, it will become general and the association will go to pieces.

This appeal of the lumber carriers was not indorsed by the convention. "The delegates," said the secretary in his report the following year, "did not wish to decide the matter, because it included the fining of boats not enrolled in the association and referred it to the Locals."¹ Meanwhile the Lumber Carriers' Association disbanded, and was followed in 1900 by the present association, which then made an agreement with the union, and has done so each succeeding year. These agreements, which cover all the loading and unloading ports, contain no clause whatever relating to non-association boats. It is, indeed, on the side of the 'longshoremen, provided that the union shall furnish all the men to unload the boats. The employers are protected by a clause which reads,—

Failing to supply such men within twelve hours, said boat shall have the right to employ enough outside labor to unload said boats.

It is also agreed that, if a boat has been loaded by non-union men the unloading local shall charge 5 cents per M. extra.

This practice of fining a boat which has been loaded or unloaded by non-unionists has a bearing on the relations of the union to the Association of Lumber Carriers, as will appear when the practice is described. It has been in vogue since the beginning of the national organization, and, indeed, was the strongest weapon of mutual protection which brought the scattered locals together. The convention of 1893 adopted a resolution providing for the practice, and the constitution of the international association contains the following sections:²—

¹ *Proceedings, Eighth Annual Convention 1899*, p. 19.

² Article XVI.

PENALTIES.

SECTION 1. Whenever any vessel or barge loads or unloads with non-union men, then it shall be the duty of such Local where the loading or unloading was done to notify the General Secretary-Treasurer to enforce extra charge of ten cents per hour for loading lumber and five cents per thousand for unloading lumber, two cents per ton for unloading iron ore and coal, twenty-five cents per thousand bushels for elevating or trimming grain, two cents per ton for trimming ore and coal, and for boats which do not trim two cents per ton extra for unloading. Provided, further, that boats loading or unloading lumber shall be punished by enforcing grain, coal, or ore rates, and those loading ore, coal, or grain shall be punished by enforcing lumber rates, and where boats, after being fined, still refuse to employ union labor at the ports where loaded or unloaded, the Locals in ports for which said boats are destined are requested to double the fine for each succeeding offence, and it shall be the duty of the Locals to notify the General Secretary-Treasurer that the said fine has been enforced.

SECTION 2. It shall be the duty of the Local that has received such fine to give the captain of such vessel or barge a receipt for the same, with the seal of the Local attached.

SECTION 4. The President and Corresponding Secretary of all Locals shall notify, under seal of their respective Local, the Secretary-Treasurer of any boats that have violated the constitution of our association, and in case of error or misunderstanding the Local that orders the fine imposed shall reimburse the Local collecting the fine. When the boats are to be fined for violation, the order must be sent through the General Secretary-Treasurer to enforce the fine.

When a fine has been wrongfully imposed, the matter is brought by the secretary of the Lumber Carriers to the general secretary-treasurer of the 'Longshoremen, and he refunds the amount and collects it from the offending local.

Since this practice of fining boats has long been recognized and enforced as a penalty for hiring non-union 'longshoremen, it naturally also might be enforced as a penalty for refusing to join the Lumber Carriers' Association, as

requested by that association in 1898. This has been done by some of the locals, though others charge the non-association boats the same prices as the association boats. The union refuses to make agreements with individual vessel-owners. Thus it has reversed the policy of earlier days, when the locals, in order to prevent the employers from organizing, preferred to deal only with individuals. By dealing with an association the competitive conditions are equalized at loading and unloading ports, and the Carriers' Association becomes responsible for violations by individual owners. The non-association owner, having no agreement, may be charged any price that the local wishes and can enforce. If he protests, the answer is that he can get the association price by joining the association. This opportunity to make extra earnings is enough of an inducement to the locals to lead them to put a higher price on non-association boats without any request to do so from the association or its representatives. Such a request the present association has not made. It, of course, would consider its agreements violated if the union charged a non-association boat less than an association boat, and would have its remedy by an appeal to the international officers.

In addition to fines the local unions give priority in loading and unloading their boats to members of the association over non-members. Such preference is prohibited as between members, the Buffalo agreement providing that "boats shall be unloaded strictly according to priority of arrival at this port." Not protected by such a clause, the non-association boat in a busy season is at a disadvantage. In the agreement it is stipulated that a verified list of the members of the Lumber Carriers' Association in good standing and the name of the vessel annexed shall be sent by its secretary to each of the local unions on the chain of lakes, and each vessel carries a

certificate showing that it is properly enrolled and in good standing.

Owing largely to this support by the union, the present Lumber Carriers' Association has been able to hold its members and to enforce its scale of freight rates. It includes 85 per cent. of the lumber-carrying tonnage on the Lakes, the outside vessels being the older and smaller boats, doing but little of the business. The association is controlled by lumber dealers who are also vessel-owners, though a number of them are solely carriers. By resolution adopted in 1903 the owners agree not to charter their boats through agents who do not belong to the association, and shippers agree not to allow charters to be made of any vessel whose owners are not members in good standing.

The association adopts a scale of freight rates to and from each port on the Lakes. These rates have been materially reduced in the past two years, notwithstanding the great increase in wages, the firemen and seamen having secured advances from \$15 to \$25 a month for deck hands, and the wheelmen from \$20 or \$25 to \$45. The recent advances in 'longshoremen's wages are not as great proportionally, since they have been organized much longer. Railroad competition has become a serious matter on account of better facilities and lower wages. The railroad car goes direct from the shipping yard into the receiving yard. The yard hands are paid 17 cents to 20 cents an hour, while the vessel-owner must pay 50 cents an hour to the loader and a piece-rate for unloading at which the 'longshoreman earns 60 cents or more per hour. In spite of their association the vessel-owners claim that the union "gets all the juice out of the orange." The members of the union on their side realize that the lumber supply is falling off, and they are satisfied that top wages have been reached.

The Lake Carriers' Association includes the leading owners of the ore, coal, and grain carrying vessels, the largest one being the Pittsburg Steamship Company, a branch of the United States Steel Corporation. This association was inaugurated thirty years ago to oppose burdensome legislation at Washington, and has been the most important agency in securing aids to navigation on the Lakes. Some fifteen years ago it broke up the sailors' union, and for a number of years was not confronted by any union of employees. Since 1900, however, it has made agreements with two branches of 'longshoremen, the grain scoopers at Buffalo and the firemen on the boats; also with the lake seamen and its affiliated union of marine cooks and stewards; and, finally, with the Marine Engineers' Beneficial Association. In this way all of its employees have been organized. Even the remarkable spectacle was seen in 1904 of the captains and mates following the example of their crews, and organizing a Masters' and Pilots' Association, which ordered a strike and tied up the shipping on the Lakes for nearly two months. The Lake Carriers at first tried to reach an understanding with this association, but felt compelled to resist the essential feature of an agreement, namely, that the owners should not deal individually with their own captains. These, they insisted, are the executive personal representatives and vice-principals of the owners. On this ground they drew a distinction between a union of captains and a union of the crews. The latter are not hired and discharged by the owners, but by the owner's representative, the captain or mate. The masters and pilots were defeated in their strike; and many of them, as a condition of re-employment, signed contracts not again to join a marine labor organization. Commenting on this defeat, the president of the longshoremen's union, in his address at the convention of 1905, said:¹—

¹ *Proceedings, Fourteenth Annual Convention, 1905*, pp. 36, 37.

Had there been a federation of all the maritime organizations, working in harmony and union, the humiliating ending of the masters' and pilots' strike could not have happened. We had it in our power to win the battle for the masters and pilots, if given an opportunity to do so, but were not permitted by their officials, who were carried away by their own importance, believing that they were equal to the situation without the co-operation and assistance of any other organization, and that it would cast a reflection on them as professional men if they were to be identified with a common, every-day lot of workers like the I. L. M. and T. A.

Taking advantage of the defeat of the captains and mates, the 'longshoremen have proceeded to organize the pilots (that is, the mates), and to bring them in as another branch of their association. At the convention of 1905 these new pilots' local unions were represented by four delegates; and, while it is understood that under no circumstances would the Lake Carriers concede the organization of the masters, yet they seem to have conceded to the 'longshoremen the organization of the mates and pilots.

The outcome of the masters' and pilots' organization is significant by way of contrast with that of a similar organization on the tug-boats. The Licensed Tugmen's Protective Association, organized in 1900, is composed of captains, mates, and engineers. In 1902 this organization was involved in a contest with the Great Lakes Towing Company, known as "the trust," a member of the Lake Carriers' Association, and operating 90 tug-boats. After the strike had been in progress two months, the association asked for affiliation with the 'longshoremen; and charters were thereupon granted to each of the twenty-eight locals on condition that the 'longshoremen should not be asked to enter on a sympathetic strike. Conferences were arranged with the company through the good offices of the 'longshoremen and the Lake Car-

riers' Association, by which in 1903 the Licensed Tugmen's Association secured the exclusive employment of its members and a scale of wages. Meanwhile the tug firemen and linemen had been organized by the 'longshoremen; and an agreement was also secured for them with the same company. These agreements were renewed in 1904 and 1905. Consequently, the 'longshoremen's union, through these two branches, controls the captains and all members of the crews operating nearly all of the tug-boats on the Lakes.

The Association of Dock Managers at Lake Erie ports represents the employers of much the largest proportion of 'longshoremen. They are the great railroad companies or their lessees, operating the docks for unloading iron ore and loading coal, including the United States Steel Corporation at Conneaut, M. A. Hanna & Co. at Cleveland and Ashtabula, and others. The association has been in existence since 1874, for the purpose of establishing uniform scales of charges for loading and unloading boats. When the ore shovellers and coal handlers were organized by the 'longshoremen in 1898, they secured agreements with individual managers; but, finally, in 1900 the Dock Managers' Association took up the problem of regulating wages as well as charges. At that time the 'longshoremen had organized all ports, except Toledo and Sandusky; the dock managers entered into an agreement providing for the exclusive employment of union men at these as well as other ports; and the union agreed to admit to membership all of the local men. In this agreement the 'longshoremen extended their jurisdiction to cover also the highly skilled hoisters and engineers, as well as the wholly unskilled dock laborers and all employees on the docks.

In contrast with the lumber carriers, the dock managers do not depend upon the union to maintain their

organization. They had regulated charges for twenty-five years before the unions were strong enough to share with them. It is an interesting fact that the prices charged to vessel-owners for unloading iron ore are 2 or 3 cents a ton lower in 1905 than they were in earlier years, while the tonnage rates paid to 'longshoremen are 4 to 6 cents higher. Prior to 1899 the shovellers at Cleveland received 8 to 10 cents per ton, the rate standing at 9 cents in 1898. The first effect of the union is seen in the fluctuating piece-wages of 10 to 12½ cents in 1899; and the final effect is seen in the uniform rate of 14 cents in 1900, reduced to 13 cents in 1901 and 1904, but restored to 14 cents in 1903 and 1905. The rate charged to the vessel-owner by the dock managers is 19 cents a ton, leaving a margin of only 5 cents to the dock manager against a margin of 10 or 12 cents in earlier years. This margin, it should be said, is no longer decisive; for it applies only to the old style of hoisting bucket paid for at tonnage rates,—a style which, as already shown, has been largely displaced, and will soon disappear under the competition of the great automatic buckets operated at day-wage rates. These revolutionizing improvements have been introduced during the period since the union began to secure advances in wages, so that, notwithstanding those advances, the cost of handling ore has been reduced. Further, as already stated, the advance in earnings, except for hoisters and engineers, has not been nearly so great on the new machinery coming into use as on the old machinery going out of use.

III.

Enough has been said to show that the 'longshoremen's association has grown up and extended its organization without any preconceived plan. This will be seen further

in noticing the variety of relations existing between "locals" and "branches" and the international organization. The locals are usually very small in the number of members, since they are organized on craft lines; and there are some forty crafts or occupations within the organization. Seven of the crafts are spoken of as "branches." The branch in some cases is admitted as a local, and in other cases it is an association of locals. Only locals as such are represented in the 'Longshoremen's Convention. Thus the International Brotherhood of Steam Shovel and Dredgemen is an organization which has been in existence several years, with headquarters at Chicago, with its general president and other general officers, its board of directors and its general executive board, with its twenty local "lodges" widely scattered (including one at Panama) and with its own official journal, *Steam Shovel and Dredge*. Yet this organization is known simply as "Local 460" of the I. L. M. and T. A., with two votes in the last convention. The same is true of the International Brotherhood of Steam Shovel, Dredge Firemen, Deck Hands, Oilers, Watchmen, and Scowmen of America, known as "Local 470." Likewise the Marine Firemen, Oilers, and Water Tenders' Benevolent Association, with branch offices at seven ports on the Great Lakes and headquarters at Buffalo, is known as "Local 124," with six votes in the 'Longshoremen's Convention.

On the other hand the Licensed Tugmen's Protective Association is composed of twenty-eight locals, with separate charters from the 'Longshoremen's Association entitling each local to at least one vote in the convention, and an additional number if its membership exceeds one hundred. The Tug Firemen and Linemen have a representative for each of thirteen separate locals, and the Fishermen for twenty-two locals. Each has its "branch" organization with general officers, like the dredgemen.

These branches hold their own annual conventions, and conduct their business entirely separate from the 'Longshoremen's Convention. They select their conference committees to meet the employers and to make agreements. It would seem on paper that they are important wheels in the 'longshoremen's union. As a matter of fact, however, their powers are no greater than those of any local union of ore handlers or grain scoopers. This is on account of the position that has gradually been conceded to the executive council of the international association, consisting of the president, secretary-treasurer, and nine vice-presidents elected at the annual convention (biennial after 1905). All locals

have full power to regulate their own wages, whether by the hour, by the thousand, or by the ton; but the association recommends that the locals whose interests are identical in the same locality establish a monthly correspondence, so that a more uniform scale of wages may be established.¹

In this effort to secure uniformity the locals with identical interests, whether they are recognized as branches or not, send their delegates to the conferences with the associated employers. Such a delegate is not recognized unless he comes with credentials showing that he has full power to bind his local to whatever agreement is entered upon. The agreement takes precedence over all constitutions and by-laws, whether of locals, branches, or the international organization. It cannot be reviewed by referendum or by convention. In fact, as viewed by their employers, "the only capital the union has is their reputation of fulfilling their contracts." They are in the peculiar position of making a contract to furnish all of the labor necessary to do certain work at certain wages or piece-prices, yet without subjecting themselves to a penalty for failure. Naturally, the employers look to the international officers to

¹ Constitution, Article VI., Section 4.

see that the locals furnish the men. They, indeed, always reserve "the right to secure any other men who can perform the work in a satisfactory manner until such time as members of the I. L. M. and T. A. can be secured."¹ This reservation applies to two classes of cases,—inability of the local union to furnish men and a strike of the local union. Where the local cannot furnish men, it is the duty of its president or manager to notify the captain within twelve working hours of the time when the boat is placed at the dock.² The captain then employs outsiders if he can find them, but hoists a flag to indicate that a non-union man is at work. As soon as a member of the union appears, the non-unionist is laid off, the union man is employed, and the flag is lowered.

In the other case, of a strike or refusal by a local to work on a vessel, it is considered a violation of the contract, and the vessel may be sent to another dock or port to be unloaded according to the agreement, and the men who refuse to work are discharged.³ Resort to this clause has seldom been necessary because the international officers have promptly furnished men, even going so far as to furnish men outside of their own organization to take the places of the strikers. The constitution of the international organization also provides for such contingencies by giving adequate powers of control over the local unions. Locals are forbidden to take part in any sympathetic strike or any other strike, or to assist another local, without the consent of the executive council.⁴ The council has the power to fine a local \$10 for the first offence, \$25 for the second offence, and to expel the local for the third offence.⁵ With these powers the executive

¹ Dock Managers' Agreement, 1905, Section 3.

² Lumber Carriers' Agreement, Sections 1 and 2.

³ Dock Managers' Agreement, 1905, Section 12.

⁴ Constitution, Article XIII., Sections 3, 4, 8.

⁵ Ibid., Article XVII., Section 1.

council, through the international president, has enforced all of the agreements so promptly and effectually that the employers without exception have only the strongest words of commendation for the record of the union in this respect.

Practically all of the very few strikes that have occurred in recent years have been those of new organizations not yet admitted to membership in the 'Longshoremen's Association. Indeed, the growth of the association, especially in the way of organizations other than 'longshoremen proper, has followed upon the defeat, or the prospect of defeat, of those organizations in strikes of their own initiation. This has already been shown in the case of the pilots. The same was true of the tugmen, whose strike in 1902 was lost, but who secured their agreement through joining the 'longshoremen's union. Without mentioning other instances, it is evident that the 'longshoremen show a reversal of the usual course of unionizing, in that with them the skilled and salaried employees have not led in organization, but have followed and relied upon the disrespected "dock-wolloper." It was the lumber handler, the ore shoveller, the coal handler, who led the way, and afterwards took in and gained for many skilled occupations favorable conditions and union recognition which they were unable to gain for themselves. In no case has this been done through a sympathetic strike or a violation of any agreement. The newly admitted organization has usually been required to wait until the existing agreements expired, and then, in the conferences with employers on a renewal of agreements, it has been cared for the same as the others.

Naturally, with so many occupations and races there arises dissatisfaction with some of the agreements. But the members of the various branches have seen a few vivid lessons of the penalties inflicted when a branch or a local

attempts to act alone. This was spectacularly true of the strike called by Local 124 in April, 1903, when that local was dissatisfied with an agreement just about to be made. Local 124 is known as the Marine Firemen, Oilers, and Water-tenders, employed on all the lake steamers, and had been a "branch" of the 'Longshoremen's Association for four years. Its officers, unable to carry their point, brought on the strike without the knowledge of the executive council. The latter declined to permit a sympathetic strike of other locals, although the work of all of their members was interrupted. The lake carriers filled the places of the firemen, and the other 'longshoremen continued to work with the non-unionists. After being defeated in a two months' strike, the firemen offered arbitration, which the lake carriers refused, but finally, through the representations of the 'longshoremen's officers, they made an agreement, and the firemen were granted the terms which two months before they had refused to accept. This salutary lesson, administered to a well-organized branch whose members visit every port on the Lakes, has greatly strengthened the hold of the international officers on all the locals. The lesson is all the more impressive, for it has been accompanied in this case by an increase in wages from \$25 or \$30 a month to \$45 to October 1, and \$65 from that date to the close of navigation. There has also been a lessening in the amount of work by increasing the number of men, so that one man fires four doors where he formerly fired six.

It is significant that this strong position of the international has been accomplished without the backing of a treasury. Other national and international unions have built up strike or "defence" funds, held by the general treasurer and available only for those local unions whose strikes have been sanctioned by the international officers. These funds are accumulated through a per capita tax

on all members of local unions. But the per capita tax of the 'longshoremen is only 5 cents as against 15, 25, and 40 cents a month in other organizations. This barely meets the expenses of the central organization. The executive council may, indeed, levy assessments on local unions; but this has never been done. On the other hand, the dues of the local unions are 50 cents a month, enabling them, after paying the per capita tax, to accumulate a good-sized treasury which may be used as they see fit, for strikes or for insurance benefits.

This extreme local autonomy in the constitution of the union, accompanied by unusual discipline and centralization in all dealings with employers, suggests the question whether, perhaps, this union is merely a "one-man" organization, depending for its unusual success on the personality of the able executive officers who happen to have been in charge during the period of its growth. Neither the organization nor its leaders are as yet old enough to answer this question.

It will have been noted that all of the agreements of the 'longshoremen are strictly "closed-shop" agreements, stipulating the employment exclusively of union members. This is true not only of the dock workers whose agreements are something more than scales of wages,—contracts to load or unload cargoes, and therefore necessarily exclusive; it is true also of all the crafts and occupations. The first agreement of the association, made in 1893 for the port of Chicago only, was silent on membership in the union; but in 1894 the union accepted a reduction of 20 per cent. in wages, but extended the agreement to all ports on Lake Michigan and Lake Huron, and secured the exclusive employment of union men. Similar strategy has been shown at other times, as when in 1901, after substantial advances during the preceding years, a horizontal reduction in wages of 7½ per cent. was agreed

upon with the Dock Managers, and continued for 1902, accompanied, however, by a reduction of working hours to 9 or 10 per day in some cases, and 11 per day in handling iron ore and coal. This reduction in hours has been maintained, but wages were advanced 8 per cent. in 1903. They were reduced again $7\frac{1}{2}$ per cent. in 1904, with various compensations in the conditions and hours of work, and restored in 1905 with the compensations retained. This adaptation of wages to industrial conditions indicates an unusual degree of discipline in the union and a willingness to avoid strikes; and this, naturally, wins the employers to the closed-shop agreements.

On the side of the dock laborers and 'longshoremen proper the closed-shop agreements are looked upon mainly as a protection against immigrants. The higher grades of skilled employees, such as hoisters and engineers, are filled, according to the agreements, by promotion from employees on the docks where the promotions are made. These promotions come almost solely to the English-speaking laborers, especially Irish and Germans, so that these races are gradually rising from the lower grades. But the 'longshoremen and dock laborers, from whom these promotions are made, are themselves recruited from foreign immigrants; and the pressure of immigration therefore bears directly upon them. Prior to the organization of the unions there was a rapid influx of these laborers. The boss or a friend would bring up a dozen men from a distance, and put them to work, while men who had been there for years were displaced. But with the closed-shop agreement these new-comers are not admitted unless the amount of work is greater than the number in the union can supply.

This supply is regulated automatically through the initiation fees. These are under the control solely of each local union. Beginning with fees of \$5, the locals have

raised the amount to \$25 or \$50, and even \$100, according as the pressure for admission increased beyond the opportunity for steady employment of those already admitted. Again, when the pressure lightened or the work increased, the initiation fee was reduced; but the majority of the locals seem inclined to place it at \$50. Since the wages earned are much higher than what the Poles, Croatians, Italians, Roumanians, and similar races can earn outside, and since these races are notably thrifty even on those lower wages, it has been found that \$50 is just about the rate of tariff that equalizes supply and demand.

I have not mentioned the spread of the 'longshoremen's union to the Gulf and Atlantic and Pacific coasts. The original and characteristic features are found on the Great Lakes, especially the control by one organization of both ends of the vessel's trip, so that by their system of fines a weak union at one end can be promptly and effectually aided by a strong local at the other end. The salt-water locals have looked forward to a similar arrangement with the dock workers of other lands, and recently an affiliation was arranged with the International Transport Federation, headquarters, London. Thus it is something more than a dream that the oceans shall be governed like the lakes, and vessels loaded or unloaded by non-union men in any port of the world shall be punished when they touch a port across the ocean controlled by union men.

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THE EFFECT OF LABOR-SAVING DEVICES UPON WAGES.

I.

ECONOMIC literature is replete with controversies. So far as the central problems of economics are concerned, it may almost be said, *quot homines, tot opiniones*; and many of the minor problems are treated with a most appalling diversity in method and in point of view. Yet there is one small field that is practically unravaged by controversial warfare. With but few exceptions¹ economists are agreed that the ultimate effect of labor saving is invariably to increase the real income of the working classes. Whatever differences of view-point exist concern themselves chiefly with the relative emphasis laid upon the immediate loss to the laborers whose functions this form of progress renders obsolete.

Moreover, an examination of the arguments advanced in support of the prevailing view reveals a surprising uniformity. Attention is called to the fact that the cheapening of products, which normally attends the introduction of an improvement in the technique of production, represents a virtual increase in the incomes of all classes, in-

¹ Among these may be mentioned Mill, *Principles of Political Economy* (Book I. chap. vi); Ross, *Proceedings of the American Economic Association*, Fifteenth Annual Meeting (pp. 151, 152); and, perhaps, Carver (*Ibid.*, pp. 149, 150). Mill's argument rests upon a juggling of the concepts "fixed" and "circulating" capital, and their respective relations to the wage-fund, and is in so far quite out of harmony with modern thought. In Ross's view the effect of the introduction of machinery is analogous with that of the introduction of an exceptionally efficient body of slaves. From the published reports of the Proceedings of the Economic Association it would be difficult to discover the grounds on which Professor Carver based his view that it is not certain that labor-saving inventions invariably benefit the laborer; but, from his method of reasoning in an earlier address (*Proceedings of the American Economic Association*, Fourteenth Annual Meeting, pp. 183-198) it would appear that his position is not essentially different from that defended in this paper.

cluding the laborers; and emphasis is laid upon the development of the demand for the cheapened product, which may, in the end, result in a great increase in the employment offered by the industry affected by the change. The printing trade is often cited as an example of an industry in which labor saving has actually increased employment, and the business of transportation illustrates the same principle very well. The theoretical argument is often bolstered up by an appeal to economic history or to its allied branch, comparative inductive economics. The nineteenth century, pre-eminently the age of mechanical progress, witnessed an unparalleled improvement in the position of the working classes, and this in spite of an extraordinary increase in the population of the Western world. Again, those nations in which labor-saving machinery has been most extensively employed, as the United States and England, are the nations in which wages are highest and conditions of labor most satisfactory.

These are strong arguments, apparently. They are as conclusive as the arguments advanced in defence of some of the most unquestioned political and economic tenets. And yet, if we subject them to rigid analysis, we shall find that they are far from adequate. In the theoretical argument no attempt is made to discover the relative importance of opposing forces which enter into the problem. The cheapening of commodities does, indeed, have a tendency to increase all "real" incomes; but, if labor is displaced from one industry, it enters into competition with labor in other industries, and in so far tends to lower wages. The net effect upon the welfare of the working class can be ascertained only after a weighing of the opposing tendencies. This holds true, of course, only of those cases in which labor is actually displaced. But, if the industry in question develops to such a degree as to employ more laborers than formerly, such development may, neverthe-

less, be at the cost of some other industry which supplies a similar want. A reduction in the labor cost of artificial stone might greatly increase the demand for that material, and increase the number of workmen employed in its manufacture; but it would be unsafe to argue that a net increase in employment has taken place without first ascertaining how many quarrymen and brickmakers had been displaced.

Nor is the historical argument more conclusive. Economic history reveals numerous forces operating contemporaneously, but it has not succeeded in isolating any one and in imputing to it its just share in the joint result. The condition of labor has, no doubt, improved; but the causes of the improvement are still in dispute. One share in the result, however, must be ascribed to the vast increase in the available area of cultivable land.¹ Another important share is due to the unprecedented increase in capital. Popular education, by increasing the efficiency of labor and by strengthening its bargaining power, doubtless contributed some part of the total result. Trade unionism, many would maintain, has not been wholly without effect. When these and other factors are considered, it appears that history does not tell us how much labor owes to the labor-saving device. And, granting that a definite share in the sum could be traced to labor saving, we are still far from proof that all labor saving, under all conditions, tends to increase wages. We may even admit that most of those forces which dispute with labor saving the honor of having made tolerable the lot of the workingman would themselves have been inconceivable without the advance in labor-saving methods. The extension of cultivation, for example, was doubtless conditioned largely by labor-saving inventions in the iron industry. The progress of popular education may be ascribed in part, at least, to the vast increase in social wealth which resulted

¹ Cf. *Ross, loc. cit.*, p. 151.

from technical progress. But most of these indirect effects of labor saving are dependent upon conditions which may disappear with the progress of society. Unoccupied lands are even now ceasing to be a significant factor in economic life. There is a natural limit to the advantages to labor as a whole which may be secured through trade unionism. From the purely economic point of view, popular education is probably subject to a law of diminishing returns. One who wishes to discover a universal defence for labor saving will hardly be content with an argument which rests upon the effects of secondary influences of a transitory nature. It is perhaps worth while to prove that the labor saving of the past has been beneficent; but we are chiefly concerned with the labor saving of the future.

Nor can a clear light upon this problem be gained from a study of the relative position of labor in countries which differ in respect to technical development. In the first place, the disparity in other conditions is usually so great that it would be extremely difficult to isolate the influence of technical progress. And, secondly, it is a familiar fact that the development of industry in one country may bring about the decay of similar industries in other countries. It is frequently asserted that one of the effects of the growth of the cotton industry in England was the decline of the ancient and prosperous cotton industry of some of the towns and villages of British India. Accordingly, if it be granted that the lot of the British workman was improved by the epoch-making inventions in the textile industries, it still remains necessary to set against that improvement the deterioration of the condition of the Hindu craftsman, if we are to attain any valid conclusion as to the net effect upon the world's working classes.

A complete study of labor-saving devices would certainly not ignore important effects merely because they depend upon conditions which do not possess even the

proximate universality posited of the main characteristics of the existing system. Nor would it ignore influences that affect the international balance of economic power. But the more fundamental problem in the theory of labor-saving inventions concerns the direct effects of such inventions upon world labor, since such effects may be said to be as universal as the competitive order. This problem alone will be considered in the present paper. Moreover, since the problem at best is a complicated one, it will be necessary to narrow the inquiry wherever possible, by excluding the elements of friction which everywhere modify the operation of competitive laws.¹ It will be assumed that labor-saving devices are promptly adopted throughout the industries affected, and hence that no appreciable element of pure profit arises in consequence of them. A high degree of mobility of labor and of capital will be assumed; and, for convenience, it will be assumed that labor and capital displaced make their way immediately to the economic margin.

II.

It is obvious that no study of this nature can be fruitful unless it is based upon a consistent theory of distribution in its static aspects. For the purposes of the present discussion the essential soundness of the marginal productivity theory of distribution, as it is developed by Professor Clark in his *Distribution of Wealth*, will be assumed. It will be assumed that determinate parts of the current product of society, whether viewed as physical product or as value product, are imputable to the various factors in production, and that those parts form the normal incomes of the respective factors. It will

¹ A slight degree of friction will be assumed, since otherwise no motive for the readjustment of labor and capital would exist.

also be assumed that a universal law of diminishing returns is in operation,—that, with no independent change in the organization of the factors of production, an increase, actual or virtual, in one, unaccompanied by a parallel increase in the complementary factors, has a tendency to lower the productivity of the variable factor, and to increase the productivity of the factors that remain constant in quantity.

The term “labor-saving device” will be used to designate any technical improvement which lessens the absolute expenditure of labor per unit of physical product. As it is often the case that a labor-saving invention changes not only the quantity, but also the quality of the labor used in the production of a commodity, it is necessary for us to conceive of labor as measured in units of like potential efficiency. If the new process requires labor of a lower order than was formerly required, we must, in theory, reduce the new labor to terms of the labor formerly employed. We need also a unit of value with which to measure changes in productivity. Here we meet with a serious difficulty; for, if by value we mean general purchasing power, it is obvious that an improvement in technique will change in some degree the value of any commodity or group of commodities which we may select as a measure. Accordingly, the best that can be done is to be on our guard against any variation in the value unit, and to employ such devices as may keep it from vitiating our results.

Economists have long recognized that there are certain salient characteristics that differentiate one invention from another, from a purely economic point of view. An improvement in technique may result in an increased capital cost¹ per unit of physical product at the same time

¹ By “capital cost” I mean a gross sum covering the replacement of goods destroyed or depreciated in value, together with a normal return on the capital for the period in which it is used in producing a unit of commodity.

that it diminishes labor cost; that is, it may involve the substitution of capital for labor. On the other hand, capital cost may remain unchanged, or it may diminish *pari passu* with labor cost. Secondly, an improvement in technique, through the resultant cheapening of product, may so increase demand that the total value product of the industry will be increased; that is, labor-saving may be product-multiplying. The value product may, however, remain stationary, or it may even be decreased. In the third place, the improvement may affect some commodity which is primarily an object of consumption of the working class. It may affect, however, a commodity entering equally into the consumption of all classes, or into that of the well-to-do, say the capitalists, alone.¹

Without taking into account other possible differentiating characteristics,² it is evident that the above will serve as a basis for numerous types, each of which deserves special study. The economic quality of any concrete invention will be determined by a combination of three elements of greater or less purity, each one representing one of the three above series. Invention A, a labor-saving device, may so change the character of an industry as to increase the capital cost per unit of product; the resulting increase in demand may, nevertheless, be so

¹ We may represent the above facts by the following table:—

Ia	capital cost per unit of physical product increased.
Ib	" " " " " " " " stationary.
Ic	" " " " " " " " diminished.
IIa	total value product of industry increased.
IIb	" " " " " " " " stationary.
IIc	" " " " " " " " diminished.
IIIa	product of industry consumed wholly by laborers.
IIIb	" " " " " " " " by laborers and capitalists alike.
IIIc	" " " " " " " " wholly by capitalists.

² One which will readily occur to the reader is exemplified by the introduction of agricultural machinery in a region which is already thoroughly cultivated. The gross product of the land may be diminished instead of increased. Hence the price of the product may well be increased rather than diminished, the ultimate effect being an increase in rent.

great as to attract labor into the industry instead of expelling it. The product may be one which workingmen alone consume. Invention B may leave the capital cost per unit unchanged; it may result in a very slight increase in demand, and hence in the expulsion of labor; the product may be consumed almost exclusively by capitalists.¹

Since, then, labor-saving devices may vary so widely in their economic characteristics, it appears to be unscientific to group them together when it is our aim to discover their economic effects. Such a method of procedure may prove almost anything. Rather we should construct theoretical types possessing clearly defined characteristics which represent the various possible economic relations, and study the possible effects of each of these types. We may then arrive at practical conclusions by comparing our types with the labor-saving devices with which practical industry has made us familiar.

III.

For our first type we may be permitted to select the one which seems to present the least number of theoretical difficulties; that is, the one in which the smallest number of changes is involved. We shall assume that an improvement in industry A lowers labor cost per unit of physical product, but leaves capital cost unchanged.²

¹ Employing the symbols of the table of the preceding page, an invention may represent a combination of Ia, IIa, IIIa; another Ib, IIc, IIIc, etc.

² In this and the following types all elements of cost other than labor and capital cost will be ignored. Since we are dealing here with a problem in dynamics, it is clear that by ignoring the distinction between land and reproducible capital goods, or by abstracting from the share imputable to land, all our conclusions are somewhat vitiated. But to consider the effect of a labor-saving device upon two factors, labor and artificial capital, is a sufficiently complicated study. And, further, the introduction of the third factor would, in most cases, only emphasise the conclusions here reached. So far as the writer's study has gone in this direction, the result seemed to show that by introducing the element of land no conclusion reached would be subverted.

We shall assume, further, that the demand for the commodity produced is just elastic enough to maintain the total value product of the industry unchanged. Finally, we shall assume that the commodity is consumed by capitalists only.

From the assumptions that capital cost per physical unit of commodity remains unchanged, and that the total number of such units increases, it follows that capital must be drawn into the industry. Consequently, in all branches of production from which this capital is withdrawn,—and, if we assume perfect fluidity of capital, this would be in all industries whatsoever,—the physical productivity of capital will increase and that of labor will diminish. In industries B and C and D a greater share of the products *b*, *c*, and *d* will be imputable to each unit of capital, and a smaller share to each unit of labor. Again, from the assumption that the total value product of industry A remains unchanged, and that a greater share of that product is imputable to capital, it follows that some labor must be expelled from the industry. This labor, seeking employment in all other industries, must lower, in those industries, the productivity of labor and increase that of capital. Two forces, then, are operating to diminish the productivity of labor. Two forces tend to increase that of capital. A day's labor will produce less wheat or iron or cotton cloth after the change has taken place than it produced before. And, since there is no ground for assuming that the exchange ratios of commodities other than the product of A have changed, we may safely say that a day's labor in wheat production commands less of every product, except that of A, than before. Now the product of A, by our third assumption, enters into the consumption of capitalists alone. The laborer's increased command over that product is of no importance to him. He has lost in his power

to command the necessities and comforts of life; but he has gained, say, in his power to command racing automobiles!¹

Passing now to a second type, we shall assume as before that capital cost per unit of physical product and total value product remain constant, but that the commodity produced enters exclusively into the consumption of laborers. As in the case just treated, a unit of labor produces less in all industries, except the one under consideration, than it did before the change in technique. As before, the laborer's power to command all other commodities diminishes. But this loss is offset by his increased power to command the products of the industry affected by the change,—industry B we shall call it. Now can we prove that the loss is counterbalanced, or more than counterbalanced, by the gain? The problem is difficult, at any rate for one who is unable to employ mathematical methods of analysis; but, as will appear later, it is fundamental to the study.

In discussing the productivity theory of distribution, it is usually most convenient to regard the original incomes of the factors as values. Thus a certain part of the value of the output of a cotton-mill is imputable to each laborer, another part to each unit of capital. But sometimes it is better to go a step farther back and treat, as the primary incomes, the commodities produced. The first form in which a cotton operative's wages appear is that of a certain number of yards of cot-

¹ It is admitted that this type would be hard to discover in practical life. Professor Clark has pointed out to the writer that any such improvement, though at first affecting only those products which are consumed by the rich, will soon find application in the production of commodities consumed by rich and poor alike. The justice of the criticism is obvious. It remains true, however, that a labor-saving device, so far as its tendency is to cheapen goods consumed by the wealthier classes, may tend to degrade the position of labor.

If we single out a special class of laborers—*e.g.*, the unskilled—it would not be difficult to conceive of types of labor-saving inventions which degrade the position of that class.

ton cloth. From this point of view the primary wages of all labor consist in a heterogeneous mass of commodities, some adapted for the exclusive consumption of laborers, some for that of capitalists, some neutral, so to speak. A similar mass composes the primary income of capital. The transformation of primary commodity incomes into money incomes, and, finally, into "real" incomes, may be regarded as the result of a series of exchanges among laborers, among capitalists, and between the two classes. In the hypothetical industry B, which produces a commodity adapted for the consumption of laborers alone, the share imputable to capital is secured by labor through the surrender of an equal value of capitalist or neutral commodities primarily imputable to labor in other industries.

Now let us say that before the improvement took place the total value product of the industry was $4x$, of which x was imputable to capital, $3x$ to labor. Labor, as a whole, then, had to surrender to capital a quantity of other goods, imputable to labor, of the value of x , in order to secure the product of capital in industry B. After the improvement, according to hypothesis, the value product of the industry remains $4x$; but a greater part is imputable to capital, a less to labor. We shall assume that the proportions are reversed, x now being imputable to labor, $3x$ to capital. To secure the product of capital, labor, as a whole, will now have to surrender $3x$ in value of the products of other industries; that is, $2x$ more than formerly.

While the productivity of each unit of labor in other industries has declined, as we saw above, the number of such units has increased through the displacement of labor from B. There is, then, the product of some additional units of labor to set against the decline in the product of each unit of the whole working force, before we

can say whether the aggregate of commodities in the hands of laborers, exclusive of the product of B, has diminished or increased. All depends, obviously, on the shape of the curve of diminishing productivity of labor. If that curve is very elastic (and experience would indicate that it is), the aggregate product of labor may be increased considerably. The labor displaced from industry B had produced in that industry a value equal to $2x$. It cannot continue to produce that amount at the margin of industry, for this would be the negation of the law of diminishing productivity. But it may produce enough to increase the aggregate product of labor by x or $x+$. Assuming an increase of x , that quantity of value may be regarded as a partial offset to the $2x$ of commodities which, we saw, labor is now required to surrender to capital, over and above what it formerly surrendered, to secure the product of capital in B. There would then remain a quantity of the products of other industries equal in value to x , to be surrendered by labor, which constitutes a net loss in value incurred by labor as a consequence of the change. But the product of B, although still representing $4x$ in value, represents a great increase in units of commodity; in the present case, a threefold increase.¹ Now it is not at all improbable that, although labor has lost outright a quantity of other commodities equal in value to x , the threefold increase in the physical content of another part of its income, representing $4x$ in value, gives more than ample compensation. Labor has lost, say, \$10,000 worth of wheat, etc., receiving no compensation in the form of value income. But the \$40,000 it spends on working jackets now buys three times as many as before. True, the sat-

¹ It was assumed that capital cost remained constant per unit of physical product, and that the proportions of labor cost to capital cost changed from 3:1 to 1:3. That is, before the change the cost of a unit of product was $a + 3a$; after the change it becomes $a + \frac{1}{3}a$.

isfaction derived from each is lessened, but probably not in such degree that the additional number of them does not more than compensate the loss in wheat.

The objection will arise: Why assume that the product of industries other than B has been increased to the extent x through the labor displaced in B? Why not assume that the net increase in product is 0, or $-x$? For the assumption I have made there is no defence in pure reason. If there is any defence at all, it must lie in our knowledge of the actual shape of the curve of diminishing productivity; and that, it must be admitted, is *hazy*. Yet the assumption that an additional unit of labor increases the aggregate product of labor by only one-half the product of the unit which was formerly marginal would seem to be sufficiently conservative. But even if the total product of labor in industry, exclusive of B, remains unchanged, it would still be not improbable that labor had gained through the multiplication of the products of B.

Again, it may be asked, why assume so great a reduction in labor cost? If it be assumed that the reduction is less, it follows that the displacement of labor is less, and hence that the loss in productivity in outside industry is less. Any gain that labor may receive through the reduction in labor cost will be diminished as the real saving of labor is diminished; but there is no reason why it should disappear. Conversely, the more pronounced the saving of labor, the more important the gain to labor.

We may now construct a third type to illustrate the effect of a labor-saving device in an industry which produces a commodity entering equally into the consumption of laborers and of capitalists. As before, we shall assume that the value product of the industry—industry C, we shall call it—is $4x$ before as well as after the change in technique. Of this, as in the preceding type, we shall assume that $3x$ is imputable to labor before the change,

x after it. Before the change took place, since capitalists consumed one-half the product, or $2x$, they must have surrendered to labor commodities equal in value to x , to secure part of the product of C primarily belonging to labor. After the change, conditions are reversed. Labor is compelled to surrender x in value of other commodities to capital, if it is to continue consuming $2x$ of the product of C. Assuming, as before, that a net increase of x takes place in labor's product of other commodities, the value loss to all labor is measured by the withdrawal of the x of other commodities formerly surrendered by capital. As an offset, the $2x$ of the product of C consumed by labor has increased in its number of physical units of commodity. And this commodity gain is obviously just half the gain which appeared in the preceding type, although the value loss to labor is exactly the same. Not improbably the gain exceeds the loss, as measured in total well-being. But there is far less reason to affirm this than in the case of industry B above.

Putting together the results of our study of these three types, we may say that, when the value product and the capital cost per unit of product remain constant through the change, labor-saving means a net loss to labor when the product is one which enters entirely into the consumption of non-laborers, and most probably a decided gain when the product is exclusively adapted to the consumption of labor. There will be a point somewhere between these extremes where the loss and the gain neutralize each other. Where this will be, it is impossible to say. Our third type indicates that, when the consumption is equally distributed, labor may very probably gain. The two controlling factors are the curves of diminishing productivity of labor and of diminishing utility. If these are very gradual in their descent, the possibilities of gain to labor are great.

In comparing these types with real conditions, it is obvious that a practical invention is most likely to occur in an industry lying somewhere between B and C. The demand for vast masses of commodities—the great stimulus to invention—is possible only in the case of those industries which supply the needs of the laborer and the small capitalist. So far as this part of our study is concerned, it seems safe to regard the practical labor-saving device as beneficial to labor.

IV.

We may now extend our study by discarding the assumption that capital cost per unit of physical product remains constant. The assumption is retained, however, that the total value product remains unchanged. Assume, first, that capital cost per unit of physical product diminishes. If capital cost and labor cost diminish in the same proportion, neither will be expelled. The same proportions of the total value product of the industry will be imputable to each. If labor produced $3x$ before, capital x , the same condition persists through the change. If, then, the product enters exclusively into the consumption of capitalists, labor gains not a whit, but loses no more. If the product is exclusively a laborer's ware, labor gains all, capital nothing. For, as before, the only use to which capitalists can put the x value imputable to capital is to secure other products through exchange. x remains the product of capital, and commands no greater quantity of other products than before.

If the saving of capital is more pronounced than the saving of labor, capital is expelled, labor drawn into the industry. The whole argument of our first type may then be employed, *mutatis mutandis*, to show that labor gains in every case, capital in every case losing in total value

product and only in some cases securing compensation through increased commodity income. If, on the other hand, the saving of capital is less pronounced than that of labor, while labor stands to lose in case the product is consumed by capitalists alone, it loses less than in type A, since less labor is expelled from the industry affected by the change, less capital attracted to it, than in the case of type A. Capital saving, attending labor saving, manifestly tends to extend the range within which labor saving is beneficial to labor; and the greater the degree of capital saving, the wider that range.¹

But, if we assume that the diminution in labor cost is attended by an increase in capital cost, it is obvious that the result will be quite different. Labor was expelled, capital attracted, when capital cost per unit of physical product remained constant. If we assume that capital cost increases, it follows that both expulsion and attraction are accentuated. Where labor lost little before, it now loses much. Where it gained considerably before, it now may gain nothing: its greatest gains may be reduced to little, if the increase in capital cost be great. Increase in capital cost, attended by decrease in labor cost, narrows the range within which labor may gain through labor saving. The greater the increase in capital cost, the less the possibilities of gain to labor; and it is not difficult to conceive a labor-saving device which may wreak injury upon labor, though cheapening the products which laborers consume.

And here it is pertinent to compare reality with our fictitious constructions. Which type of invention are we

¹Capital-saving devices, though comparatively neglected in economic literature, are probably not less frequent or important than labor-saving devices. Simplification of machinery, cheapening of machinery through improvements in the technique of their manufacture, are processes taking place everywhere. In a complete discussion of the effect of technical progress upon wages this influence should receive detailed consideration; but it enters only incidentally into the present problem.

more likely to find,—the one which lessens the capital cost per unit of physical product, at the same time reducing labor cost, or the one which increases capital cost? The writer, at any rate, would find it far easier to cite instances of the latter kind.

V.

The reader, no doubt, has found difficulty in suppressing his impatience while perusing the foregoing pages. It has been assumed consistently that value product has remained constant; but is it not an almost universal law that labor saving is product multiplying? I fancy that most defenders of labor saving are ready to rest their case with a study of the results of product multiplication; and by this, it will be generally agreed, is meant the increase in value product as well as in physical product. Accordingly, we may proceed to an examination of the results of product multiplication.

In order to simplify the problem as much as possible, I shall assume that industry A of the preceding discussion, after a period of time in which the value product remained the same as before the improvement in technique took place, undergoes a sudden development, the value product increasing many-fold. We may then consider how far this development of the industry repairs the injury to labor wrought by the original change. It is assumed as before that the capital cost per unit of physical product remains unchanged, the labor cost alone decreasing.

Under these conditions some of the labor at first expelled is drawn back into the industry. Quite conceivably the amount attracted into the industry exceeds that originally displaced; and this withdrawal of labor from other industries tends to increase the productivity of labor in those industries. But the expansion of the industry we are studying requires the withdrawal of capital also from other

industries,—a force which tends to reduce the productivity of labor. Quite manifestly our problem requires a weighing of the two tendencies. Otherwise we have no right to affirm anything at all as to the beneficence of multiplication of product.

According to our assumption that, after the improvement, capital cost per unit exceeds labor cost, it follows that the expansion of the industry attracts more units of capital than of labor. While, however, it may be affirmed that the withdrawal of a unit of labor from the margin tends to increase the productivity of labor, and that the withdrawal of a unit of capital tends to lower it, we have no right to assume that the withdrawal of one unit of each leaves the productivity of labor unchanged. If labor and capital are at present combined in the average proportions of one unit to ten, it would be very unlikely that the withdrawal of one unit of capital would diminish the productivity of labor in the same degree that the withdrawal of one unit of labor would augment it.

We may, however, assume that there is some quantity of capital the withdrawal of which will diminish the product of labor in the same degree that the withdrawal of a unit of labor will increase it. Call that quantity q . If labor and capital are combined in industry A in the proportions of one unit of labor to q units of capital (after the invention has taken place), the expansion of the industry will be of no positive advantage to labor, though of no disadvantage. For the gain to labor in other industries from attraction of labor into A will be exactly counter-balanced by the loss from attraction of capital into that industry. The social gain from an increased consumption of the products of A means nothing to the laborer, since, it is assumed, the product is designed for capitalist consumption. If, however, labor and capital are combined in the proportions of one unit of labor to one-half q units

of capital, labor will gain more from the attraction of labor to A than it loses from the attraction of capital. Product multiplication, in this case, tends to undo the injury of the original change; and the greater the degree of multiplication, the greater the probability that the initial loss to labor will be transformed into a positive gain. Conversely, if labor is combined with capital in the proportions of one unit of labor to $2q$ units of capital, expansion of the industry only emphasizes the mischief originally wrought by the improvement in technique.

Next we may assume that industry B of the earlier discussion undergoes expansion. As we left that industry after the improvement in technique, one unit of labor was combined with three of capital. Expansion of the industry would attract, then, one unit of labor for every three of capital. Let this proportion represent one unit of labor to q units of capital. So far as labor in industries other than B is concerned, the expansion of industry B would have no effect on the productivity of each unit. A day's labor would command as much of every article other than the product of B as it did before. It would command, also, the same amount of B as before the expansion. But the expansion implies that labor parts with a greater quantity of the product of other industries, in which no improvement has taken place, for a correspondingly greater amount of the product of B in which such improvement has taken place. Quite probably, then, the material commodities consumed by labor and the real welfare of labor have increased.

If we assume, however, that the proportion of one unit of labor to three of capital represents one to $2q$, conditions change. When capital and labor are drawn into the industry in these proportions, the withdrawal of capital from the remaining field reduces productivity more than the withdrawal of labor increases it. Under such condi-

tions the expansion of the industry reduces the command of labor over all articles except the product of B. Nor is the command over B increased, although, as before, expansion means a larger consumption of that product, and may mean a gain in material welfare to the laborer. The net gain, however, is manifestly less than in the preceding case. And, if the expanding industry combines labor and capital in the proportions of, say, one unit of labor to 10*q* units of capital, the effect on labor may well be disastrous.

Obviously, the study of the expansion of an industry under the influence of invention is merely one part of the general study of the expansion of special industries in its effect on the welfare of society and its classes; and this study must be treated under the dynamics of consumption. When an industry expands, it must be because of such a change in wants as will make the product of a unit of capital or of labor in the expanding industry represent a greater value than a like unit in some other industry. It is not difficult to conceive of cases in which the development of an industry may injure one of the factors, however, though such development must almost necessarily increase total human welfare. If the total quantity of labor and capital remain constant, a great increase in the demand for hand-made lace, for example, would draw labor away from other industries, while leaving capital practically unchanged in those industries. Accordingly, the physical productivity of labor would increase everywhere. That of capital would diminish in every industry except, perhaps, in that of lace-making. Capitalists would, of course, receive partial, or perhaps complete, compensation through increased consumption of lace. If the commodity had been one not consumed by capitalists, there would have been no compensation for the capitalist. Similarly, we can conceive of an industry in which expansion lowers the product of labor in general industry without

offering any recompense in the form of increased production of commodities adapted for laborers' consumption.

Returning now to the main subject, and resuming the results of this part of the inquiry, it appears that the advantage to labor of product multiplying is by no means certain and universal. Whether advantages shall arise or not depends on the kind of product affected by the expansion, and still more upon the combining proportions of labor and capital in the expanding industry. The former consideration has already been sufficiently exploited. What we are here interested in is the question whether a practical invention will be most likely to cause an expansion resulting in the withdrawal of labor and capital from outside industry in the proportions of one to q , one to $q-$, or one to $q+$. And, to answer this, we must first consider whether q can be given definite significance.

A little reflection will show that the proportion one to q is something very near the average in which labor and capital are combined in all industries. To withdraw labor and capital from outside industries in such a way as to leave the relative values of the products of those industries unchanged, a certain amount will have to be withdrawn from each industry. If the amounts of labor and capital taken from each industry are taken in such proportions as accord with the general combining proportions in that industry, the productivity of the remaining units of each agent remains unchanged. From some industries one unit of labor will be withdrawn together with one of capital; from others one of labor, together with ten of capital; and the regrouping in the expanding industry will combine the factors in about the average proportions of all industries.

Then, to understand the effect of the expansion of an industry, we have first to consider whether the industry

is one in which the proportion of labor to capital is superior or inferior to the average proportions throughout society. Practical labor-saving devices take place most frequently in the industries that are already highly capitalistic, and the expansion that follows the introduction of such devices is in effect the expansion of an industry more than ordinarily capitalistic. So far, then, the tendency of practical product multiplication would appear to be to lower the productivity of labor in outside industries. At the same time, however, since the products thus multiplied are most likely to be such as enter into the consumption of the laborer, a certain amount of compensation is afforded through the increased consumption of such products. The degree of adequacy or inadequacy of such compensation will vary with specific cases.

In all the preceding discussion the effect of substitution has been ignored. The cheapening of the product of one industry may lead to its substitution for the product of some other industry. If the value product of the industry affected by the change is not increased, and productive agency, consequently, is not drawn into that industry, the labor and capital that may be driven from some other industry by the substitution of the cheapened product must find employment on the economic margin. If the proportions in which the expelled units of labor and capital were originally combined were about the average proportions, the productivity of units of labor and capital in general industry will not be affected. If the proportions, on the other hand, were one to q — or one to $q+$, this secondary effect of an invention may have a decided influence in determining the net effect of the improvement in technique upon labor. The same principle will explain the effect of the substitution of the products of an expanding industry for other products.

The result of our study may now be summed up as

follows: There is no logical basis for the view that every labor-saving invention must necessarily benefit the laborer in the long run. Most practical inventions probably do, owing to the fact that most inventions cheapen products largely consumed by labor. Secondly, there is no logical basis for the view that product multiplication must necessarily repair damage that may be caused by the original displacement of labor. The beneficence or maleficence of product multiplication turns upon the combining proportions of capital and labor in the industry concerned.

VI.

But these conclusions are based upon the assumption that the total amounts of labor and capital remain unchanged,—an assumption similar to that on which the ancient argument for free trade, now so widely discredited, was based. I have assumed that, when more capital is needed in an industry, it is drawn from other industries. Would not the results of the study be changed if it had been assumed that the capital required is not so withdrawn, but comes from a new source?

All depends upon the origin of the new capital. If it has not been created specifically to meet the need of the industry in which the invention takes place, it makes not the slightest difference whether that industry attracts new capital or an equal amount of old capital. Without the change in technique the new capital would have gone into general industry, and would have increased the physical product of labor there. Its absorption by the industry in which the invention takes place is no less real a loss to labor than the loss labor would have incurred if that capital had distributed itself in other industries, to be later withdrawn.

But it may be that the capital has been specifically

created to meet this need. In practical life the possessor of an improvement in technique is often at his wits' end to secure capital with which to exploit it. All that he can save from his income is thus employed. His offer of a high rate of interest induces those who trust him to save what they can. Thus new capital is created *ad hoc*. Furthermore, when once developed, a practical invention creates a fund of profits which is naturally employed for further development. Thus the profits due to an invention are not only the lure that induces men to make inventions, as Professor Clark has said: they are also the inducement to the formation of capital to exploit an invention, and, to a certain extent, the source of such capital. The existence of profit, with the consequent growth of capital, very probably renders advantageous to labor every labor-saving device, if a sufficient period is given for adjustment. But eliminate profit through improved financial methods, render it easy to withdraw capital from established uses for employment in a new field, or to divert the natural increase of capital from the old fields to the new, and it becomes impossible to hold to the view that labor saving is invariably a force making for higher real wages.

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EMPLOYERS' ASSOCIATIONS FOR DEALING WITH LABOR IN THE UNITED STATES.

I.

THE rise and rapid progress during the past five or ten years of the movement for the organization of employers of labor into strong associations having for their sole or primary purpose the treating with, or resistance to, the claims of similar associations of their employees, constitutes the latest, and at present most significant, feature of the labor movement in the United States. In the first place, it indicates clearly that that movement is now entering upon a new phase. In it is found expression of the tardy recognition by employers that the trade-union movement comprehends something more than a mere struggle for higher wages and shorter hours; that it is based upon, and carries with it, the effort to change radically the whole organization of industry, in so far as the important matter of the method by which the relations of labor and capital, or employer and employee, shall be adjusted, is concerned.

The explanation why this realization has come at the present time is found, on the one hand, in the great growth in strength of the trade-union movement during the past few years, and on the other in the increasing extent to which this movement has laid emphasis upon, and given definite statement to, the essential or fundamental aims for which it stands. Again, it is important to note that the organization of employers into associations of this character is but a logical step in, and the natural complement of, the trade-union movement; that the development of such associations con-

stitutes an essential feature of the latter, without which it would be impossible for it fully to accomplish the purposes for which it exists. The essence of the aim of trade unions is the establishment, by means of collective bargains, of standard wages and other conditions of employment that shall be of general application to all establishments of a trade throughout a competing district. This being so, it is evident that this aim can only be carried out where the employers are in a position to act in accord in treating with the unions. The unions clearly recognize this, and notwithstanding that the associations of employers are organized with the avowed purpose of resisting in many respects their demands, have welcomed their formation as being in the direction of the organization of industry along the lines for which they have been contending.

Many other reasons may be given why the rise of these organizations should be considered a forward step in the evolution of the labor problem. No one can read the history of the struggle between labor and capital during the past century and a half without a feeling of depression which springs from his recognition of the fact, now so clearly apparent, that much of the trouble that has occurred has been due to the lack of understanding on the part of the employers of the essential character of the objects for which the workingmen were contending and the philosophical principles upon which the right of workingmen to combine and collectively assert their demands could be defended. The general organization of employers, their meeting in annual and other conventions, the publication of official journals devoted to the discussion of trade union and other labor matters, are significant in that they may almost be said to represent the first real attempt on the part of employers of labor to arrive at an understanding of the basis upon

which the trade union rests, and the principles in accordance with which the relations of capital and labor should be adjusted. Finally, in enumerating the important features of the employers' organization movement, prominent mention should be made of the important service that they can render in keeping the trade unions within bounds as regards their demands and actions. There is a very real danger that, as trade unions gain in power, they will use their strength to push their demands far beyond what can properly be justified. As Mr. Henry White, one of the most logical and acute reasoners among the labor leaders, in a contribution to the *Monthly Bulletin of the National Civic Federation* has well put it:—

When actuated by a common grievance, they [the trade unionists] appeal to the highest sentiment; but, when they feel secure in their power, they are likely, unless controlled by rare wisdom, to apply it as ruthlessly as the other side, and the latter, hard pressed in turn, are moved to make the same appeal to justice. That is human nature, and we might as well be candid about it. The unionist is liable to seize his opportunity, just as the employer has done, to exact all he can without regard to ultimate consequences, and, when he feels safe, becomes deaf to all entreaties.

Whatever may be our sympathies with the general principles of the trade-union movement, all must indorse the statement of Mr. White, and recognize the desirability of an organized resistance that will subject its claims to critical examination and keep its operations within its legitimate sphere. One has only to bear in mind the claims and actions of the trade unions in reference to such matters as restriction of output, limitation upon the number of apprentices, boycotting, unlawful picketing, etc., to appreciate the need of such organized and critical opposition.

II.

The movement for the organization of employers for the purpose of treating with, or opposing, trade unions, is one whose history can be given only in its general outlines. This is due to the fact that for a great many years employers in many industries have had their local and national organizations for the consideration of their special trade interests. Originally these associations did not include in any way among their functions that of even considering, much less of taking action in relation to, labor matters. It was inevitable, however, that, as the trade unions made their demands upon employers generally in a trade instead of upon particular establishments, the employers should utilize these organizations for the consideration of these demands. As the principle of collective bargaining gradually extended, many of these associations added to their functions that of treating with labor. It is probable that at the present time almost every general association of manufacturers or employers of labor concerns itself with labor matters to a certain extent.

There are many reasons, however, why these associations for general trade purposes are not well fitted for the performance of this particular duty. To accomplish this end, the association should be so conducted that its officers should have formally delegated to them adequate power both to make and enforce labor contracts; and, if it is to be able to do this, and also to take such further action as is necessary in order to resist the improper demands of the unions and protect its members when trouble actually arises, the association must have adequate dues for the creation of a defence fund and a steady and well-organized executive machinery comparable to that possessed by the unions. This is being recognized by

the employers, and special organizations of employers, local and national, that have for their sole function action in relation to these matters, are, therefore, constantly springing into existence. It is with these associations that the present study is chiefly interested.

Without attempting to give a complete enumeration of the cases where associations have, as their sole or most important function, to determine the conditions of labor in the trade, the following statement of the chief examples where national associations of employers take action in this respect will give a general idea of the extent to which this movement has advanced. A very early, possibly the earliest example, of the organization by employers of a national association of this character is that of the creation of the Stove Founders' National Defence Association in 1886. Since its organization this body has contributed greatly to the maintenance of industrial peace in that branch of the foundry industry having to do with the manufacture of stoves and furnaces by making formal contracts with the national unions of the most important classes of skilled employees of the trade,—the Iron Moulders' Union of North America, the Metal Polishers', Buffers', Platers', Brass Moulders', and Brass Workers' International Union of North America, and the Stove Mounters' International Union of North America. The first of these contracts was made in 1891 with the first-named of these organizations, since when it has been annually renewed. The success of this effort led to the creation in 1898 of the more comprehensive organization of employers, the National Founders' Association, which, like the stove founders, adopted the policy of concluding collective labor contracts with the Iron Moulders' Union. In the same year, 1898, the Dock Managers' Association, representing all the important shipping interests of the Great Lakes, adopted the same

policy in respect to the International 'Longshoremen, Marine and Transport Workers' Association, and annually since then contracts have been made regarding the conditions of labor that shall prevail in that industry. The fall of the following year witnessed the organization of the very important National Metal Trades' Association, which almost immediately, or in 1900, succeeded in concluding with the International Association of Machinists an agreement which it seemed, at the time, would furnish the means for the adjustment of all troubles in the machinery industry. This was followed by the execution of similar agreements between the American Newspaper Publishers' Association, a body organized in 1887 and incorporated in 1897, and the International Typographical Union in 1901, and the International Printing Pressmen's and Assistants' Union in 1902. The year 1903 was marked by the members of a number of strong national associations of employers succeeding in coming to an agreement among themselves regarding the policy that they should pursue towards labor, and in making binding contracts relative to the matter with national associations of employees. Such agreements were thus executed in that year by the United Typothetæ of America with the International Printing Pressmen's and Assistants' Union, by the National Association of Marble Dealers with the International Association of Marble Workers, and by the National Tailors' Association with the United Garment Workers of America. We thus find at the present time in the seven great industries of stove and furnace manufacturing, metal foundry work, lake transportation, machine construction, publishing and printing, marble cutting, and ready-made clothing manufacturing, strong national associations of employers so organized and conducted that they have been able to treat with national associations of employees, and conclude contracts

with the latter relative to the conditions of labor that shall obtain in those industries. There are various other trades, such as cigar-making, boot and shoe manufacturing, hat-making, brewing of malt liquors, etc., where employers act together in dealing with national associations of employees, but where they have not as yet developed equally strong associations to represent them in negotiating contracts. Although not national in scope, special mention should also be made of the Illinois Coal Operators' Association, organized in 1897, as that association may be said to have pointed out the way for the organization of many of the national associations that followed. In the building trades, also, notable progress has been made in the organization of employers in important cities for the purpose of bargaining with trade unions. The New York Building Trades Employers' Association was created in 1903, and has already been very influential in establishing some measure of order in the chaos that had for years existed in the building trades in that city.

The listing of these larger organizations of employers, however, gives but a very imperfect idea of the extent to which during the past few years employers have resorted to the formation of associations for the purpose of representing their interests in the determination of labor conditions. All over the country local associations have sprung into existence. This is particularly true of the machinery, iron moulding, printing, and building industries. These local associations have assumed various forms. In most cases they are created by the employers in a particular trade. In others they include all classes of employers in the district covered, and in still others persons who are not employers of labor, but are opposed to trade unions or their practices, may be members. The latter class of associations have usually

taken the name of "Citizens' Alliances," and in many ways may be said to partake of the character of law and order leagues.

As soon as the movement for the formation of organizations of employers had gained a certain headway, it was but natural that steps should be taken looking to the creation of a general body through which the movement might, so to speak, have a directing head. The first move in this direction was taken by the National Manufacturers' Association. This organization had been created in 1895, mainly for the purpose of building up the export trade in manufactured goods of the United States. In 1901 it broadened its scope by taking action for the purpose of defeating two labor measures, the eight-hour and the anti-conspiracy bills, which were then pending before Congress. In its annual meeting at New Orleans in 1903 Mr. David M. Parry made the question of the relations between labor and capital, and particularly that of the "open shop," the leading topic by devoting almost his entire annual address to that subject. This address inveighed against the practices of trade unions, and dilated upon the dangers that it was believed were involved in the whole trade-union movement to such an extent that Mr. Parry personally, and the National Manufacturers' Association as a body, immediately became in public estimation the head of the whole movement on the part of employers to organize for the purpose of resisting trade-union demands. While the members of the association showed themselves greatly interested in, and in general sympathy towards, the desire of Mr. Parry that the association should make the opposition of trade-union demands one of its chief aims, they were unwilling to sacrifice the other objects of their organization by giving too much attention to this subject. It was consequently decided to create a separate organization that

should fill this need. A Committee on Constitution was appointed, which met in July of the same year at Indianapolis, drafted a constitution, and issued a call to all officers and members of employers' associations and citizens' alliances to meet at Chicago on October 29 for the purpose of effecting a permanent organization. The outcome of this latter meeting was the formation of "The Citizens' Industrial Association of America," with Mr. Parry as its first president.

Although this association was organized for the special and sole purpose of uniting employers and employers' organizations into a general body that should represent its members in their opposition to trade unions or trade-union practices, its organization is of such a character that it is extremely doubtful whether it can entirely fill the needs of the case. What is wanted is a general body that shall unite the national and local associations of employers in particular trades, and stand in such relations to them as the American Federation of Labor does to the national and local unions. This the Citizens' Industrial Association does not do. Not only is the membership of the association heterogeneous, including diverse sorts of organizations and individuals, but its objects are general rather than specific. The association, in fact, is but little more than a general organization for carrying on a propaganda of certain principles, and is not at all fitted to perform the technical functions of the directing head of associations, which are, or should be, purely business bodies for adjusting with analogous bodies of employees the conditions of labor.

The foregoing, at best, has given only the most general idea of the nature of the associations of employers that have been organized and the manner in which they work. To understand their real significance as a part of the modern industrial mechanism properly, it is imperative

that the general considerations already given should be supplemented by a more detailed study of the exact manner in which these associations are organized, the principles for which they stand, and the actual experience that they have had in attempting to put them into practice. This can best be done by making a selection of one or more of the more important associations and studying their organization and history in detail. For this purpose a choice has been made of the National Metal Trades Association, the National Founders' Association, and the Building Trades Employers' Association of the City of New York, organizations that are the most prominent of the employers' associations, and have also had unusually instructive experiences in dealing with strong organizations of labor.

III.

The National Metal Trades Association is composed of the leading firms or corporations operating plants engaged in the manufacture of metal goods of any kind. It was organized by a few manufacturers in the fall of 1899 for the purpose of putting an end, if possible, to the frequent strikes and lockouts with which the machinery industry was at that time troubled. It has steadily increased in importance, until, according to the report of its commissioner in 1904, it embraced, approximately, 325 manufacturers having in their employ between 40,000 and 50,000 workingmen, while also having affiliated with it local associations with a membership of approximately 500 other manufacturers employing from 35,000 to 40,000 more employees.

The association had scarcely been organized when the necessity for its existence was clearly demonstrated. Early in 1900 indications began to accumulate that the machinery industry in the United States might have to

pass through the same costly struggle that Great Britain experienced in 1897,—a struggle which at the time seemed to threaten the destruction of England's supremacy in that field. The machinists had a strong and aggressive union in the International Association of Machinists, while the employers were almost wholly without organization. In 1900 this union deemed that the time had come to enforce a more general compliance with its essential demands, which included the recognition of the union, the employment of only union men, the adoption of a nine-hour day, and a limitation upon the number of apprentices to be employed. The movement was inaugurated at Chicago on March 1 of that year, compliance with these terms being demanded of the machinery manufacturers of that city. The employers seem to have been taken more or less by surprise. Perceiving that the movement was a general one, they, however, promptly effected an organization under the name of the Chicago Association of Machinery Manufacturers. This association from the start adopted a conciliatory attitude, and made various ineffectual efforts to come to an agreement with the machinists' union. In the mean time the strike had spread to a number of other cities; and the National Metal Trades Association, which had been organized the year before, decided to intervene for the purpose of securing, if possible, an adjustment of the difficulty. On March 17 its officers had a formal conference at Chicago with those of the International Association of Machinists. An understanding not being reached at this conference, a second one was held two weeks later, on March 31. At this meeting an agreement was finally arrived at. This agreement was embodied in what is known as the "Chicago Agreement," and constitutes one of the most notable agreements between organized labor and organized capital that has taken place in the United States. It

is drafted in the terms of a formal contract between the two national associations, and, after indorsing the principle of national arbitration in the settlement of trade disputes, provides, as its most important stipulation, that

in all pending disputes and disputes hereafter to arise between members of the respective organizations—i.e., an employer and his employees—every reasonable effort shall be made by the said parties to effect a satisfactory adjustment of the difficulty, failing in which either party shall have the right to ask its reference to a committee of arbitration, which shall consist of the presidents of the National Metal Trades Association and of the International Association of Machinists, or their representatives, and two other representatives from each association appointed by the respective presidents. The findings of this committee of arbitration by a majority vote shall be considered final as regards the case at issue, and as making a precedent for the future action of the respective organizations.

This important agreement was but a preliminary step towards the settlement of the points at issue between the two parties. There still remained the more difficult work of determining the actual conditions that should obtain in the machinery trade, which was the work of the conciliation or arbitration board provided for by the agreement. This board met for this purpose in New York, May 10 to 18, and, after considering with the greatest care all the elements involved, finally succeeded in arriving at a basis acceptable to both parties. This agreement was set forth in a set of resolutions that constituted a real collective labor contract, in that it provided not merely for the manner in which conditions of labor should be determined, but attempted to determine what those conditions should be. This agreement was justly hailed as one of the greatest steps ever taken in the United States towards placing the relations of employers and employees upon a more satisfactory basis. It was cer-

tainly a great gain for organized labor, as it represented the acceptance of a number of the most vital principles for which it had been contending for years.

Unfortunately, notwithstanding this apparently satisfactory adjustment of all points of dispute, the whole arrangement broke down in the short space of one year. The explanation of this failure can be found in the character of the contract itself. The contract between the two associations provided that on May 20, 1901, the nine-hour day should be introduced in all the shops of members of the employers' association. Nothing was said in the contract regarding whether the hourly rate of wages should be changed so that the workingman would continue to receive the same daily rate of wages as formerly or not. About this point it was soon seen that the two contracting parties were completely at variance. This being so, it would at first seem that this was a matter that should be settled by arbitration, as provided for in the agreement. Here, too, however, an equally irreconcilable difference existed. The employers took the position that this matter of adjustment of wages was a local one to be settled by the individual shops or districts, while the employees claimed that it was an essential part of the national agreement and should be adjusted by the two national bodies. On these two and other lesser points a complete rupture ensued. Strikes were again inaugurated, and this very promising effort came to an end.

It is not necessary for our present purpose to attempt to apportion the blame for this failure. It is only important to point out that failure came, not because the method of collective bargaining is impracticable, but because this particular bargain did not provide properly for contingencies that were bound to occur. To a considerable extent, also, the lack of success may be attributed to the

fact that neither the employers nor the employees were sufficiently educated regarding the principles that should be followed in concluding such a contract. The employees insisted that the contract should cover certain points the determination of which properly should lie in the discretion of the employers, while the latter possibly did not appreciate the full weight of the argument of the employees that the matter of hours of labor and wages was not wholly a local issue. In a way, therefore, it may be said that the contract represented a step taken before the parties were fully prepared to continue it.

As a necessary result of this failure both the National Metal Trades Association and the International Association of Machinists assumed towards each other a different attitude from that which they had taken up to that time. Their efforts to reach an agreement fixing the conditions of employment in the trade practically ceased, and the two now are facing each other more or less as hostile bodies. The New York agreement of 1900, in addition to being a contract, also served in a way as a statement of the position of the parties representing the matters in dispute and the manner in which future differences should be adjusted. On the rupture of this agreement the National Metal Trades Association deemed it desirable to formulate and make public the fundamental principles upon which it stood, and the attitude and policy that it should adopt towards trade unions and labor problems generally. This it has done in a declaration of principles, adopted June 18, 1901, and in resolutions concerning apprentices and employment bureaus to be maintained by employers' associations, adopted May 4, 1903. The essence of this declaration of principles is contained in the first section:—

Since we, as employers, are responsible for the work turned out by our workmen, we must therefore have full discretion

to designate the men we consider competent to perform the work and to determine the conditions under which that work shall be prosecuted, the question of the competency of the men being determined solely by us. While disavowing any intention to interfere with the proper functions of labor organizations, we will not admit of any interference with the management of our business.

The remaining sections but amplify and apply to specific cases the thought here expressed. They declare that the association will not submit to the principle of the closed or union shop, and that it will tolerate no restriction upon output, the number of apprentices and helpers that may be employed, or the kind of machinery and methods of work. Strikes are disapproved, the principle of arbitration is indorsed, and the members are recommended to meet their employees, either individually or collectively for the purpose of determining the conditions of labor that shall obtain in their shops. Hours and wages are declared to be local matters that should be arranged by the local association in each district.

This definite statement by the employers of their position in respect to the matters of dispute between labor and capital is in itself a great gain. Until it had been made, the first essential did not exist for securing any settlement of matters in dispute that would be permanent because based upon fundamental principles accepted by both parties. As the position of the workingman has long been known, the issue may now be said to be squarely joined. There consequently exists a basis for discussion, the lack of which has been the real cause of the failure of past efforts to reach a permanent agreement.

Having now obtained an idea of the events which led to the creation of this association and its subsequent history, together with its general position in respect to labor matters, and especially toward trade unions, it remains

for us to describe more particularly its technical organization and the means that it has adopted for the maintenance of its position as against that of the trade unions with which it has to contend.

The National Metal Trades Association has an exceptionally well worked out scheme of organization. According to its constitution, as revised in 1903, the association contemplates having all the metal manufacturers organized in local or district associations which shall then be affiliated with the national organization. Until that object is attained, however, provision is made whereby individual manufacturers may be directly affiliated with the national body. At the present time, therefore, the membership of the association consists of both individual firms and local associations. No local association is admitted to membership unless it has adopted a constitution and by-laws in conformity with those of the national association. In order that the work of the association may be decentralized to a certain extent, the constitution provides that the members located in adjacent territory and having common interests shall be organized by the administrative council of the central body into district associations, proper consideration, of course, being given to the wishes of the members directly concerned. Each of these associations has its own officers, constitution, and by-laws, which must conform to those of the national body and must hold each year a convention, at which it must elect its district committee of five persons. At the present time the members of the associations are grouped in seventeen such district associations. It is the district associations which take direct charge, under the direction of the administrative council, of the defence of the members in the case of any strike.

The association has the usual complement of officers, elected annually by the members. The voting power of

members is measured by the number of their employees, but no firm can vote on the basis of more than five hundred employees. The real direction of the affairs of the association is vested in an administrative council, composed of the president, first and second vice-presidents, treasurer, and eight councillors, elected every two years by the association in its regular convention, and a commissioner appointed by the council. The association is supported by initiation fees and regular and extraordinary assessments. The initiation fee consists of a payment by the new member to the reserve fund of the association of a sum in such proportion to the unexpended balance of this fund as the number of operatives employed by him bears to the total number employed by all the members. Upon his resigning, he is entitled to have refunded to him his proportionate share of the balance of the fund. If the member so elects, he can pay instead an initiation fee of \$25, in which case, however, he will have no claim upon the reserve fund upon his retiring from the association. Assessments levied upon members must be based on the number of operatives employed by them. The amount of the regular assessments is determined by the administrative council quarterly, in accordance with the needs of the association, but may not exceed 20 cents per operative per month. Extraordinary assessments may only be levied in cases of emergency and by a two-thirds' vote of the administrative council. The funds of the association consist of a general fund, available for ordinary expenses, and a reserve fund, which can be drawn upon for defence purposes only. The reserve fund must be invested by the Treasurer, under the direction of the administrative council.

The essential aims of the association are to establish unity of policy and action on the part of members in

all matters that refer to their contractual relations with their employees, and to bring to the aid of such members as are subjected to what are believed to be unjust demands on the part of labor unions the full power of the whole association. The first of these is accomplished by the adoption of a formal declaration of principles and resolutions, setting forth the position of the association on all important points, and by the incorporation in the constitution and by-laws of provisions by which the members are rigidly bound neither to take no action likely to result in a strike, nor to settle any strike when it has occurred, except upon such terms as the association may approve. Various means have been established whereby the association lends its assistance to members involved in difficulties resulting from their insisting upon principles indorsed by the association. The declaration of principles has already been commented upon. In respect to the manner in which the association shall proceed in attempting to avoid or settle labor differences, careful provision is made by the constitution and by-laws. These provisions, describing the whole machinery by which the association acts, are so important that they should be produced *in extenso*. They read:—

Whenever any disagreement may arise between any member and his employees, which is likely to lead to collective action on the part of said employees, immediate notice thereof shall be given in writing to the commissioner and to the district chairman. Such officers shall be further kept advised of any new phase of the situation until such disagreement shall be adjusted.

Whenever a collective demand is made by employees on a member of this association, notice of such demand in writing shall be immediately sent to the commissioner and district chairman; and a full account or copy of such demand shall be mailed to such officers. Whenever possible, it shall be insisted that such demands shall be put in writing, and a statement made to those presenting the demands that a copy be forwarded to the National Metal Trades Association.

No member of the association shall, without first submitting the matter to his district officers, take any action liable to provoke a strife, except in cases of emergency, when he shall at once notify his district officers of his action. No member shall, without first submitting the matter to his district officers, adjust with his employees any strike or difficulty involving a principle of local or national interest. In the conduct of labor disputes, members must proceed in the manner set down in the constitution and by-laws, or forfeit all rights to financial or moral support from this association, at the discretion of the administrative council.

Another section, using practically the identical language as the last paragraph quoted, further provides that no district shall take action in reference to a strike or its settlement until the matter has been submitted to the commissioner for the approval of the administrative council.

In regard to aggressive measures the constitution provides that no local lockout proposed by a district shall be countenanced by the association unless it is advised by members employing 90 per cent. of the operatives under the jurisdiction of that district and has been approved by a two-thirds vote of the administrative council, and that no general lockout shall be declared except upon an 80 per cent. vote of the members assembled in an annual or special convention at which 80 per cent. of the members are duly represented. Written notice that the question of a general lockout is to be voted upon must also have been mailed to each member at least two weeks prior to the assembling of the convention.

In respect to the second aim of the association, the assistance of its members involved in labor difficulties, the association acts in a variety of ways. In the first place, it may assist the member involved to procure men to replace those striking, or have his work done for him, or directly grant to him financial help. In

all cases it undertakes to take such legal steps as are necessary for the protection of his rights, and puts at his disposition the services of its commissioner, and other officers, to advise and assist him in arriving at a settlement of the difficulty. In securing men to replace strikers, the association is not bound in any case to procure more than 70 per cent. of the members' striking force. To secure these, the association is authorized to pay such a bonus as may be necessary in order to obtain them. To meet this demand for labor, the association, however, places its chief dependence upon its system of local and national employment bureaus. All of the local metal trades associations have been encouraged to establish and maintain employment bureaus through which their members can obtain employees without having to resort to trade unions. In 1904, according to a report made to the national association, such bureaus were in active operation in fifteen cities. On May 4, 1903, the national association adopted a set of regulations setting forth the rules for regulating the local employment bureaus, and providing for a national employment department. It would lead us too far astray from the main purpose of this paper to enter more fully upon a detailed description of the organization and workings of these bureaus. The reader, moreover, will find in the resolutions of the Metal Trades Association relative to these institutions a very clear statement of their aims and methods of work. Some further reference will also be made to them in our concluding remarks.

IV.

The second employers' association selected for special description is the National Founders' Association. This association constitutes another organization of employers

created for the sole purpose of treating collectively with employees upon a national basis, and is scarcely second in importance to the National Metal Trades Association, that has just been considered. Like that association, it has had, since its organization, to deal with one of the oldest and strongest national labor unions of the country. This is the Iron Moulders' Union of North America, which was founded nearly fifty years ago, and has long had a reputation as one of the best-managed unions in existence. Some idea of the character and strength of this union may be obtained from the facts that it has a membership of nearly seventy thousand, a reserve fund of several hundred thousand dollars, that it collects from its members dues of fifteen dollars per man per annum, in addition to special strike assessments, while its disbursements exceed six hundred thousand dollars yearly. Its journal, *The Iron Moulders' Journal*, is one of the best-edited labor organs published in the United States.

The National Founders' Association was organized at Cincinnati, Ohio, in 1898, by some thirty foundry operators, who had previously held a preliminary meeting in New York, at which they had agreed upon a general scheme of organization and tentative draft of a constitution and by-laws. It has steadily grown in importance until at the present time it embraces from four hundred to five hundred members owning plants in all parts of the country, and may fairly be said to constitute a general national organization of founders. At the outset it cannot be too emphatically stated that this association was not organized in a spirit hostile to trade unions, but, on the contrary, represented the desire on the part of its organizers for a body through which equitable and proper relations might be had with such unions. The sincerity of the association in its desire to establish satisfactory relations with

the employees of its members through direct negotiations with their organization, the Iron Moulders' Union of North America, is seen from the fact that immediately after its creation it took up the matter of formulating a general agreement regarding the settlement of labor disputes with that body. This resulted in the adoption in 1899 by the two organizations of what was known as the "New York Agreement," the language of which is practically identical with that of the "Chicago Agreement" entered into between the National Metal Trades Association and the International Association of Machinists in 1900, the New York Agreement, in fact, constituting the model after which the Chicago Agreement was drafted. This agreement was far from a collective contract regulating the conditions of labor in the foundry. It was but the expression of the opinion that each organization recognized that the other represented the properly constituted agent for its members, and that differences which arose should be adjusted, if possible, by a frank conference between the representatives of the two.

The actual agreements regulating conditions of labor were at that time being made between the individual employers and the local unions of the Iron Moulders' Union. This practice was unsatisfactory both to the National Founders' Association and to the Iron Moulders' Union, as under it it was impossible to work out any consistent policy relative to labor contracts. The National Founders' Association, at its Detroit meeting in 1902, accordingly provided for the appointment of a "Committee on Uniform Agreements," and intrusted to it the task of drawing up the form of a general agreement that, in the words of the committee itself, "would carry with it uniform conditions, and which could be applied to every locality under the jurisdiction of the National Founders' Association." The idea was not that the national agree-

ment should supplant the local agreement, but that it should express those general conditions that should be incorporated in all such contracts. At the annual convention in November, 1903, the committee reported the draft of such an agreement. The plan of a uniform agreement was theoretically indorsed, but no form of agreement was officially adopted, it being the opinion of the members that the committee should continue its efforts to secure a formal agreement that would be acceptable to the moulders' union, as well as the association. Unfortunately for the settlement of conditions in this trade, the committee was forced to report at the convention in December, 1904, that, notwithstanding its best efforts, it had been unable to secure the acceptance by the iron-moulders of those fundamental principles which the committee believed to be essential features of any proper agreement between organized labor and capital. More than this, they had to report that, in their opinion, the "New York Agreement," which had in a way constituted a general agreement, should be formally abrogated on account of the extreme and unjust manner in which, in its opinion, its provisions were interpreted by the moulders and the failure of the latter to comply with its conditions. This unfortunate condition of affairs, it was believed, was due wholly to the character of the officers who happened to be in control of the moulders' organization.

The association, accordingly, at its convention in December, 1904, abrogated the "New York Agreement," and, being unable to secure a new national agreement in its place, formally adopted in its stead a carefully prepared programme, setting forth the policy of the association in respect to labor matters, declaring that no agreement would be recognized that was not based upon that statement. This statement of policy is an exceedingly important document, and gives in the most concise and

direct way the philosophy, so to speak, of a great body of employers regarding conditions that should prevail in labor contracts. As it takes substantially the same position as that taken by the declaration of principles of the National Metal Trades Association that has already been described, it is not necessary to analyze its provisions here. It enters into somewhat greater detail and covers more points than that declaration.

An account of the technical organization and methods of work of this association can be given in very brief space, owing to the fact that its organization and methods are similar, in most essential respects, to those of the National Metal Trades Association, already described. Membership in the association is limited to persons or firms engaged in the operation of foundries where castings in iron, steel, brass, or other metals, are made. The practical administration of affairs is vested in an administrative council, consisting of the chairman and vice-chairman of each district, and the president, vice-president, and treasurer of the association, and a salaried executive officer known as "commissioner," who is appointed by the president, with the approval of the administrative council. Probably the most characteristic feature of the organization of the association is the division of the country into eight districts, and the election by the association of a district committee of five members for each, to have immediate direction over affairs within its territory. The association is thus not a league of local associations, but a body in which the individual concerns are directly represented. While analogous, this system, it will be observed, is not identical with that adopted by the Metal Trades Association. The association is supported by dues paid by members in proportion to the average number of moulders, moulding-machine operators, and core-makers employed by them,

the amount of these dues varying from twenty cents per man per month, in the case of apprentices and unskilled workmen, to forty cents per man per month for journeymen moulders. In no case, however, can the payment of a firm be less than fifteen dollars per month. These dues were fixed at such a rate as it was believed would, under ordinary conditions, permit a considerable portion of the receipts to be carried to a reserve fund upon which the association could draw when involved in important labor disputes.

The investigation and adjustment of labor disputes constitutes the main object of the association. In case of any difficulty arising with his labor force, it is the duty of a member to report it immediately to the commissioner, whose duty it is to investigate the trouble, and, if possible, secure its equitable adjustment. It is expressly provided that "no adjustment of any such difficulty shall be made by the commissioner, or by the member involved, which shall not be in full conformity with any and all agreements and obligations which may be binding upon the association at the time of such adjustment." The by-laws further provide that,

By asking the aid of the association, the member places the matter in its charge, and binds himself to carry out any decision made by the administrative council or those acting under its authority; and, pending the decision of the matter, he must not make any settlement or discharge the workmen without the consent of the administrative council.

Under this system it does not at all follow that the association will in every case take the side of the employer. It may find that the member is wholly or partially at fault, and in such cases does not hesitate to act accordingly. Frequently it finds that the whole trouble is largely the result of a misunderstanding or some personal

incident that can be adjusted by a third party. The system, at any rate, insures that the several members will not constantly be taking inconsistent attitudes, and that fundamental principles of general applicability are not violated, and the whole question of the establishment of proper relations between labor and capital thereby made more difficult.

In aiding members while on strike, the system of the association approximates pretty closely to that of a mutual strike insurance institution. The by-laws thus provide that, when due effort has been made to secure the settlement of a difficulty and has proven ineffectual, and a strike has followed, the administrative council, in its discretion, may grant aid to the member affected: by procuring workmen for him to the extent of 70 per cent. of his labor force; by having the work done for him elsewhere to the extent of 70 per cent. of his recent output; and by giving him pecuniary assistance not to exceed two dollars per man per day, to the extent of 70 per cent. of the average number of men employed by him. In accepting aid, the member obligates himself to abide by the action of the association in adjusting the difficulty.

The National Founders' Association, like the National Metal Trades Association, has adopted the system of issuing "certificates of recommendation" to such employees as prove themselves to be not only satisfactory workmen, but willing to abide by the conditions that, in the opinion of the founders, should be a part of the labor contract. It also publishes a monthly periodical, entitled *The Review*, in which are given the current news of the association, an account of labor difficulties in which its members are involved, etc. Its most important other form of activity is the policy which it adopted in 1904 of the association itself engaging a certain number of moulders under yearly contracts, so as to have them

available to send wherever any member has need of them on account of the employees of his establishment being on strike.

V.

Although the chief intent of this paper is to give an account of the movement for the organization of employers only in so far as that movement has resulted in the formation of national associations, an exception should be made in the case of the building trades, as here, from the very nature of the industry, the dominating organization must necessarily be that of the district or city. As the competing district in this industry is local rather than national, it is manifestly impracticable for negotiations with labor unions relative to labor conditions to be intrusted to a national organization of employers in the same way as in other industries, though there may be room for such an organization for certain general purposes. Apart from this, moreover, the problem of organization in the building trades, both as regards employers and employees, is in many respects different from that in other industries; and the form of organization that has resulted presents a number of features peculiar to itself and of more than ordinary interest.

The conditions that make the problem of organization in the building trades of unusual difficulty consist in the facts that so many different but yet interdependent trades are involved; that the workingmen, instead of being continuously employed by the same masters, are constantly changing employers; that the number of employers and small shops is so great that unity of action is difficult to secure; and that the work is of such a character that labor enjoys a high degree of mobility, being able with comparative ease to move from place to place in search of work. Of these the first—that a large

number of trades have to be dealt with—is much the most important. As a consequence of these peculiar conditions, no industry has suffered more during recent years from labor difficulties. In New York, Chicago, and other important cities all building operations have repeatedly been brought to a practical standstill. The significant feature of these disputes is that in almost all cases their causes, upon final analysis, can be directly traced to lack of, or faulty, organization. It is for this reason that sympathetic strikes and lockouts, inter-union contests, etc., have played such an important rôle. While both the employers and the employees have their organizations by trades in most cities, there have been lacking central organizations through which all of these bodies could be made to act in harmony. The experience of New York City in this respect is typical; and the history of the events of the past two or three years, which have led up to the correction of this defect by the creation of strong central organizations to represent the employers and employees of all the building trades, is well worth brief description.

For a number of years prior to 1902 the thirty odd trade unions of the building trades were grouped into two general bodies,—the Board of Delegates and the Building Trades Council,—which were unfriendly to each other. Roughly speaking, the former represented the outside trades, and the latter the trades calling for work inside of houses. The disputes between these two organizations occasioned great hardships to builders. After repeated failures the attempt to amalgamate them was at last successful, the two being merged on March 11, 1902, into the “United Board of Building Trades.” This board, by the terms of its organization, constitutes a body the functions of which are to adjust differences that may arise between the trade unions representing the

workingmen in the different branches of the building trades, and to insure that no union shall be able to involve other unions in a dispute until the ground for such action has been carefully investigated by, and received the approval of, the United Board. The individual unions are allowed to adjust their differences with employers as they deem best, but the assistance of other unions can be only demanded by bringing the matter before the board, and, after it is so brought, the decision of the board must be rigidly adhered to. In this way very many ill-advised and unreasonable demands are checked that formerly would have led to strikes. The greatest service of the board, however, lies in its settlement of the frequently occurring disputes between unions relative to their respective jurisdictions. In this respect the board performs for the building trade unions the same function as that performed by the American Federation of Labor on a larger scale for the entire country. The board itself makes no agreement with employing builders, this being left to the individual unions to take up with the corresponding associations of employers in their trades.

The employers in the building trades were a year behind the workingmen in coming to a realization of the advantages offered by the possession of a single central body that could act for them all collectively. Like the employees, the masters in each trade had their own special organizations, but until 1903 little or no effort was made to establish permanent relations with each other. The relations between the building contractors and their employees represented by their unions, however, became so intolerable that the former at length saw that, without united effort for the protection of their interests, they would have to make a complete surrender to the unions or look forward to an indefinite continuance of chaotic conditions. They, accordingly, in May, 1903,

succeeded in effecting an organization under the name of "The Building Trades Employers' Association of the City of New York." The constitution of this association provides for four classes of members: represented members, consisting of persons or firms holding membership in any employers' association represented on the Board of Governors; individual members, consisting of persons or firms actively engaged in building operations in the city, and not members of such employers' associations; associate members, consisting of persons or firms engaged directly or indirectly in building operations in the city, but not eligible as represented or individual members, such, for example, as selling agents for materials; and honorary members, consisting of the commissioners or superintendents of the departments of the city of New York connected with the building industry. The first two classes only are entitled to vote at meetings or be represented on the Board of Governors. The funds of the association are derived from initiation fees, dues, fines, etc. The initiation fee consists of \$25 for each represented member, payable by his association; \$50 for each individual member; and \$25 for each associate member. The annual dues are \$40 per member. If an individual member is eligible to membership in one of the affiliated employers' associations, he must pay the initiation fee and annual dues as if he belonged to such association in addition to his payments as an individual member.

Although provision is made for a president, vice-president, secretary, etc., the real government of the association is vested in a board of governors, consisting of three representatives from each of the thirty employers' associations that had united to found the association, and of such other associations as might afterwards be admitted. On this board the representatives of each employers'

association are entitled to one vote for every five of its members in good standing, such vote, however, to be cast as a unit. Some idea of the powers of this board may be gathered from the following statement of its duties, as enumerated in the constitution of the association:—

The Board of Governors shall have power to decide all controversies, difficulties, and differences arising between the members of this association and their employees; to determine and regulate the conduct of the members of this association relative to such controversies, difficulties, and differences, and to decide all disputes and disagreements arising between employers' associations represented on the Board of Governors and employees' associations. Also all controversies, difficulties, and differences arising between the different employers' associations represented on the board; to determine, regulate, and control the conduct of such employers' associations relative to such disputes, difficulties, and differences, and generally to determine, regulate, and control the conduct of the members of this association and the employers' associations represented on the board in all matters pertaining to their relations with their employees, or in any and all matters affecting the building industry, the business interests in such building industry of the members of this association, and for this purpose to make general rules and regulations, provided, however, that, when the controversy, difficulty, or difference existing affects members of only one employers' association represented on the Board of Governors, the Board of Governors shall take no action, except upon the request of the governors of the association in which the difficulty, difference, or controversy exists. They shall have power to delegate any or all of their powers, excepting the imposition of penalties, to committees. The decisions, orders, prohibitions, and regulations of the Board of Governors shall be final and obligatory upon each and every member of this association, and shall be complied with, obeyed, and observed in good faith by every such member. . . . Where the question of ordering a cessation or resumption of work by any or all of the members of the association is before the board, representatives from not less than 75 per cent. of the associations represented on the board shall constitute a quorum; and, to order a cessation or resumption of work, at least four-fifths of the vote must be in favor of such an order.

It will be seen from this statement that the individual employers' associations have taken the radical step of subjecting themselves almost absolutely to the decision of the general association in respect to all matters having to do with labor disputes, when such disputes can in any manner affect any branch of the building trade other than their own. Much the most significant and characteristic feature of this whole system, however, is the means that is provided to insure compliance on the part of the members of the association with the latter's orders. This consists in the obligation of each represented and individual member to furnish a bond with the National Surety Company of New York as surety, in an amount to be determined in each case by the association, that all of the latter's orders, decisions, and regulations will be rigidly complied with. This bond, in the form adopted by the association, is what is known as one for liquidated damages; that is, one where no proof of damages has to be furnished, the full amount becoming payable merely upon the Board of Governors declaring that the conditions of the bond have in any way been violated. The Board of Governors is, furthermore, given power to impose fines and penalties upon members for cause.

Immediately upon its organization the new association undertook, in conjunction with the representatives of the labor unions, to formulate a statement of the general principles that should govern both parties in the determination of labor conditions and the adjustment of disputes. In this effort success was not at first obtained. The association, in order to bring the unions to terms, thereupon inaugurated a general lockout which almost stopped building construction work in the city of New York during several months of the year 1903. This lockout was terminated by the unions practically accepting all the demands of the builders' association. The essential

feature of these demands was the acceptance of a scheme for the arbitration of all disputes which had been proposed by the builders. This scheme was accepted at a conference between the Board of Governors of the Building Trades Employers' Association and the representatives of the labor unions held on July 3, 1903. Probably the most important provisions of the plan thus adopted are those known as Sections 8 and 15, which provide, respectively, that

The unions, as a whole or a single union, shall not order any strike against a member of the Building Trades Employers' Association, collectively or individually, nor shall any number of union men leave the works of a member of the Building Trades Employers' Association, nor shall any member of the Building Trades Employers' Association lock out his employees, before the matter in dispute has been brought before the General Arbitration Board,

and

The members of this association agree to employ members of the trade unions only, directly or indirectly, when parties to this agreement. It is understood, however, that in any case where a trade union is unable to provide sufficient workmen the employer or employers in that trade may hire workmen, not members, who shall become members of the union, if competent. That, after the date of the signing of this agreement, no union shall become a party to this agreement without the consent of the Executive Committee.

The importance of the first of these sections as a means for preventing sympathetic and unnecessary strikes needs scarcely to be pointed out. The second merely affirms a practice that the members of the Building Trades Employers' Association were already pretty generally following. It only remains to note that, under the scheme of organization of employers and employees that has been described, the function of making the actual labor

contract still properly rests, as in the past, with the organization of employers and trade unions for each branch of the building trade, while the rôle of the central association lies in determining only the general conditions that shall be met in acting where more than one trade is affected, and in serving as a higher court for the adjustment of disputes that cannot be settled effectively by the subordinate associations and unions. Thus far there can be no doubt that perfecting the organization of both parties has contributed powerfully to the maintenance of peace in the trade. That it represents the final step in the evolution through which the movement has been passing is hardly likely.

VI.

The foregoing account of the National Metal Trades Association, the National Founders' Association, and the Building Trades Employers' Association of the City of New York, is of interest, not merely as showing the organization and methods of work of these particular bodies, but as pointing the lines along which the whole movement for the organization of employers is proceeding.

As regards methods, it is interesting to note to how large an extent the employers' associations have profited by the experience of the trade unions, and have copied the means of action developed by them. Almost every important feature of trade-union organization finds its counterpart in the employers' organizations. Each attempts rigidly to control the action of its members in respect to the inauguration or settlement of trade disputes. Each has its defence fund, and aids financially and in other ways the member involved in a dispute resulting in a cessation of work. While the trade union seeks to limit the opportunities for employment to a body

of men professing its principles, the employers' organization, through its employment and registration systems and the giving of certificates of recommendation, attempts to secure another labor force that will make it independent of such union labor. Just as the unions also have found it necessary to employ salaried business agents, or "walking delegates," as they were formerly more usually called, so the employers' organizations have their commissioners with analogous functions.

Of these different means of action, the only ones which call for further description or special consideration are those of the labor bureau and the certificate of recommendation. The importance of these two devices does not lie in the fact that they are part of the machinery for arriving at an equitable adjustment of labor conditions, but that they are rather the offensive weapon by use of which the employers' associations hope to be able to counteract and defeat the influence of the trade unions. Especially is it upon them that chief reliance is placed by employers in their fight against the union shop. The labor bureaus, as organized and conducted, combine two functions,—those of an employment and a registration bureau. As the first, there can be no doubt that these bureaus can perform a valuable service to the employers, and, if not run in a too hostile spirit to trade unions, to the workmen as well.

It is in the second, or registration, feature, however, that the trade unionist sees the chief menace to the success of his aims. This feature, as found in the better organized bureaus, comprehends the maintenance of an elaborate and complete card record system by which the name, address, trade, place of previous employment, reason for leaving such employment, record, etc., of not only every applicant for work, but of every employee of the members of the association, can be known at a

moment's notice. This record is kept to date by employers making returns, on cards provided for that purpose, of all changes made in their labor force, and the reason for such changes. The bureau, therefore, acts as a central office for the keeping of the records of all employees of the members, whether they are obtained through the bureau or not. It needs hardly to be said that an institution of this kind, by relieving employers of the difficult task of passing upon applicants for work and of finding men with the qualifications desired, can render a very valuable service to employers, and in a way may be said to fill a real want. At the time it should be noted that such an institution, taken in connection with the system of issuing certificates of recommendation to those employees who have not rendered themselves obnoxious to their employers, can very easily be an instrument of extreme injustice or oppression. Thus, for example, it could be so administered that a person discharged by an employer might practically be put in a position where it would be impossible for him to obtain employment elsewhere in his residence town. Particularly would this be so if the main purpose of the creation of the bureau was that of hostility to trade unions and as a means of crushing them out. If it was so conducted that an employee participating in a strike would in effect be black-listed by other employers, all of the recognized evils of the black-list would be present in the most aggravated form.

In the preceding pages the attempt has been made to give both a detailed description of certain typical organizations of employers and to comment upon those features which are general to the whole movement. This detailed consideration was necessary in order that the real character of the movement might be understood. The value of such a study would be largely lost, however, if no

effort were made to point out, as definitely as our knowledge will permit, the fundamental significance of the movement as a part or feature of the evolution through which the organization of industry is now passing, and what are the lines along which it will probably run in the future. The fact that stands out most clearly from this study is that employers' associations, to perform their special function of dealing with labor properly, must be organized along trade lines, and that a place must be found in their scheme for both local and national bodies. It would seem that logically, as in the case of trade unions, the administrative unit should be the local association, and that the national body should represent a federation of the former, though having sufficient power to compel the locals to abide by its decisions on important points. The National Metal Trades Association approximates pretty closely to this scheme of organization. Under this system there is also room for district associations, in order to enable local associations in the same general trade district to act together in respect to matters pertaining especially to their territories.

As the movement advances, while the principles that should control in determining the scheme of organization will become clearer, the practical problems to be met will undoubtedly become more complex and difficult of solution. These difficulties will be especially evident where an employer is engaged in different lines of work, and it becomes, consequently, necessary for him to act with and through a number of organizations, and to have contractual relations with various labor unions. The necessity that has already been pointed out for a more satisfactory general association or federation of employers' associations in all branches of industry after the general model of the American Federation of Labor will thus become increasingly apparent.

When this degree of organization is reached, there will then be in existence bodies through which both employer and employees can authoritatively express their attitudes towards matters in which both are mutually interested. Instead of the issue being joined in individual shops, or even in individual trades, with the certainty that there will be no uniformity or consistency in the decisions arrived at, a mechanism will be in existence whereby the matters in dispute can be considered from the standpoint of the principles that should govern generally in the adjustment of the relations between labor and capital. It is scarcely necessary to emphasize the supreme importance of arriving at this condition of affairs. Until it is reached, until the principles upon which action should be based are determined, nothing approaching general industrial peace is possible. Without it all conciliatory adjustments, arbitration, etc., are but temporary makeshifts. This can be clearly seen in the failure of the efforts of the two national associations that have been considered to reach a permanent agreement with the corresponding trade unions of their respective industries, notwithstanding that their efforts were inaugurated in such a thoroughly tolerant and well-intentioned manner. The moral of the whole history is that as yet both labor and capital have devoted their attention to attempts to settle immediate difficulties rather than to examine exhaustively the principles that under modern conditions should govern their relations with each other, or, to express it otherwise, to study and make up their minds regarding what may be called the philosophy of the question. Until that is done and an approach to concord regarding such principles is reached, no efforts can be productive of more than temporary or partial results.

In conclusion, several possible far-reaching consequences of this movement for the organization of both

classes of industrial workers should at least be mentioned. In the first place, it should be noted that one fundamental outcome of the movement is the great advance which it represents towards status, or fixity, of conditions. The character of industrial organizations and the conditions under which the different factors of production will give their co-operation in the production of wealth is being determined and enforced in a general or comprehensive manner, in much the same way as if the State itself had intervened, and by the exercise of legislative authority had declared the conditions that should prevail. The method is radically different, but the final result is much the same. More and more the individual employer and employee is losing the power to determine for himself the conditions under which his work will be performed. The manufacturer or artisan in entering a strongly organized industry finds many of the most important conditions of work already almost as definitely determined as if they had been fixed by law. There is no better illustration of the fact that legislatures are by no means the only bodies who are framing the provisions that shall govern the conditions under which the modern complicated mechanism of industrial society must be operated. Organs and methods are being evolved with the purpose of devising and enforcing rules for industrial work. It is thus not a question whether they shall be prescribed by the State or not at all, but whether they shall be made by State or some other organization.

To the individualist this tendency will probably appear as presenting all the dangers of State action itself. While there may be a certain basis for this, it is one the effect of which can very easily be exaggerated. The most important fields in which the originality and energy of the individual employer can be employed are those of the selection of materials, the adoption of technical meth-

ods, the determination of the character of the product to be manufactured, etc. In these there is no tendency for the initiative of the individual to be in the least curtailed. On the other hand, it may almost be said that the employer, being relieved from the trouble of determining many of the features of labor conditions, and being certain that in such respects he is enjoying equal advantages with his competitors, will be able to concentrate his attention more fully upon the operations of production proper. Certainly, up to the present time there is no indication that dull uniformity either of manufacturing practice or product will result from the movement that we have been describing.

In another respect, however, the movement gives rise to serious possibilities for the future. If the movement for the organization of employers, while itself becoming more wide-spread and firmly established, does not have as its effect the permanent stopping of the parallel movement for the organization of employees,—a result that is hardly to be anticipated,—there will ultimately result a condition of affairs when each trade or industry will have its industrial workers strongly organized in two powerful associations. Sooner or later such associations will come to an understanding regarding the more essential principles that should govern the contracts to be made between them, or at least establish a *modus vivendi* or working agreement. When that day arrives, these two associations, acting in accord, will be able to dictate almost absolutely the conditions that shall prevail in the trade, not only as regards their mutual relations, but the consuming public as well. Indeed, there are already evidences in the so-called new trades movement, started by Mr. Smith in Great Britain some years ago, and in certain of the agreements made between employer and employee associations in Chicago and New York, that this

stage of the movement has in cases already arrived. Should action along this line continue, it is evident that the whole movement will assume a somewhat different aspect, and present a new element that will call for special consideration both by students of economics and those having in charge the protection of the general industrial interests of the people.

WILLIAM FRANKLIN WILLOUGHBY.

NOTES AND MEMORANDA.

CHANGES IN THE TAX LAWS OF NEW YORK STATE IN 1905.

Three events of more than usual interest in the history of New York taxation have marked the present year: the passage of the stock transfer law imposing a tax on sales or agreements to sell corporation stocks; the passage of a law imposing an annual tax on mortgages; the decision of the Supreme Court of the United States upholding the special franchise taxation of 1899, which for six years has been almost nullified by litigation. The stock transfer taxes go to the State, the mortgage taxes are divided equally between the State and the localities, and the taxes paid on special franchises are shared in accordance with the general property rates for town, city, county, and State purposes.

The legislature which met in January, 1905, was faced with the inevitable need of new revenue. Since 1880 New York has been moving towards the separation of the sources of State and of local taxation, and in the past ten years a leading feature of the Republican policy has been the abolition of the general property tax for State purposes (so-called "direct taxation"). Under the last administration this end was practically accomplished, the only tax collected for State purposes being one of thirteen mills on the hundred dollars for canal sinking fund, as required by the State constitution. The revenue thus given up has been made good by liquor taxation, but this is no longer adequate to the growing needs of the State. Appropriations have increased faster than has population. The growth between 1893 and 1904, from \$17,400,000 to \$26,500,000, has been necessitated both by growing population and by policies approved strongly by public sentiment.

Of the added \$9,000,000 about \$1,500,000 were for education, \$1,500,000 for good roads, and nearly \$5,000,000 for charities and corrections, as called for by the recent policy of State instead of county care. Other and larger expenditures of the same nature are in view, and the voters in a recent referendum approved the plan of a barge canal which will cost \$101,000,000. In the face of these growing needs the balance in the State treasury shrank \$5,000,000 within the fiscal year 1904. There were still other difficulties: the highest State court decided, January 12, 1904 (177 N. Y. 189) that the State had been illegally collecting and must refund certain taxes on railroads (about \$1,000,000) in towns which aided in railroad construction by the issue of bonds; and at about the same time another decision, favorable to insurance companies, compelled the State to refund, or to credit on taxes accruing, about \$1,000,000, and reduced this source of revenue for the future.

To every suggested measure of taxation strong opposition developed from those whose interests were affected. The legislature, while making liberal appropriations, seemed on the point of abandoning all attempts to provide adequate revenue; but Governor Higgins declared that he would exercise his prerogative, and would cut the appropriation bill within the amount available upon the adjournment of the legislature. The result was that the stock transfer tax became a law April 19, and the mortgage tax became a law June 3.

The stock transfer tax law, modelled after the federal law in force from 1898 to 1901, imposes a stamp tax of two cents on sales or agreements to sell corporation shares of the face value of one hundred dollars; that is, two dollars on the usual sale of a hundred shares. The law is so framed that it applies to sales on the curb and in bucket shops and to wash sales made for the purpose of influencing the market.

Strong opposition to the tax came from Wall Street, and a protest with fifty thousand signatures was presented to the governor. The law was criticised as unconstitutional, as unjust to the city, and as injurious to the business in-

terests of the State. A stock exchange was incorporated across the river in New Jersey, and many declared that the tax would drive the Stock Exchange from New York City.

It was estimated that the tax would yield from \$3,000,000 to \$5,000,000 a year. The receipts for the first three months were: June, \$440,299.66; July, \$308,689.90; August, \$477,665.36; total, \$1,226,654.92. The comptroller now estimates a revenue from this source of about \$5,000,000 per annum. The price of seats on the New York Stock Exchange declined immediately after the tax took effect, but fully recovered before the month was ended. The sales of stocks on the Exchange in June, 1905, the first month of the law's operation, were two and a half times as great as in June, 1904. The tax probably falls in the main upon the purchasers, but this means very often the speculative buyers, who may themselves be members of the Exchange. The burden upon the investing public is slight. The supremacy of New York City as a market for corporation stocks does not appear to be endangered.

The mortgage tax law just passed is the fruit of eight years of discussion. It imposes an annual tax of one-half per cent. on mortgage debts as they shall be on July 1 of each year, and upon mortgages recorded at any time during the year a stamp tax at the same rate (calculated by days) from date to the following July 1. The principal exemptions are public bonds and mortgages given to public, charitable, religious, and educational corporations, and to building and loan associations on residence property to the amount of \$3,000. The tax does not apply to mortgages recorded before July 1, 1905, unless the owner requests the recording officer to include the "prior mortgage" under the law. The new tax, wherever applied, releases from liability to the general property tax.

Four policies as to mortgage taxation have had supporters: (a) taxation as heretofore under the general property tax; (b) complete exemption of all mortgages; (c) a registration tax of one-half per cent. payable once only, regardless of

the period of the mortgage; (d) an annual tax such as the one adopted. It was pretty generally agreed that the old plan worked inequitably, as only loans in the rural districts or those made by ignorant and weaker lenders were touched; but rural sentiment still largely was opposed to any change. A strong and growing sentiment favored complete exemption, which was, however, not a political possibility. The opponents of an annual tax, led by the New York Tax Reform Association and by the Allied Real Estate Interests of the State of New York, advocated a registration tax as a choice of evils, and the real issue was thus between such a registration tax (payable once only, at the time of recording), and the annual tax.

The arguments used are familiar to students of taxation, the principal question being whether the lender or the borrower would be likely to pay the tax. Those opposing any change argued contradictorily that loans completely escaped taxation except in the rural districts, and that the interest was fixed regardless of taxation, hence that the new tax would be added to the burden of the borrowers. If this were not immediately the case, it soon would be so because of the investment elsewhere of large sums then loaned on mortgages (*e.g.*, a half billion of savings-bank loans), while no considerable amounts not already offered would be tempted into that field of investment. The advocates of the bill took the opposite view on every point. Admitting that most mortgages were in fact untaxed, they said that the fear of taxation, "the price of perjury," kept up the market rate of interest one-half per cent. or more. Essentially the same theory of shifting and incidence was recognized by all, and the different conclusions rested on different estimates of the amount of loanable funds that would be driven from or attracted to this field of investment.

In fact, the savings banks have already raised their rates on small loans, but no change can be clearly discovered in the general rate of interest on mortgage loans. A number of rural lenders have exercised their option as to prior mortgages, thus showing that their taxes are reduced in

this way; while estates in probate, usually taxed the full general property rate under the old law, are unquestionably benefited. If the old law had been strictly enforced, the present law would of course reduce the rate of interest paid by borrowers. If the old law had been absolutely a dead letter, the present law would of course increase the rate of interest. As things are, it is safe to say that the burden of the tax will, on the whole, be divided between borrowers and lenders, different localities and classes being very differently affected.

The minimum estimate of the yield of the tax for the first year was \$1,500,000, and for the second year \$3,000,000. Nothing better than a rough estimate of the yield of the tax can now be given, as no returns will be made to the State treasurer until after July 1, 1906. The amount of mortgages annually recorded in the State is about \$600,000,000, three-fourths being in New York City. Assuming an average duration of five years, the total mortgage loans in force at one time would be \$3,000,000,000, and the law, if it remained unchanged, would yield \$15,000,000 annually, one-half to the State, the remainder to the localities.

The special franchise law of 1899,¹ really but an amendment of the general tax law, was passed to bring under the operation of the general property tax that part of the value of public service corporations due to the use of the public highways. The State Board of Tax Commissioners was authorized to assess the value of "special franchises," together with that of the tangible property of public service corporations. This law has been before the courts ever since its passage, and in 1903 Governor Odell, discouraged as to its outlook, recommended its repeal. Meantime it has been approved and imitated by a number of other States. The Supreme Court of New York (which is, however, two steps removed from supremacy in the State) intrusted the question to a distinguished referee, Judge Earl, whose learned opinion upholding the law on all points was unanimously

¹See the account of this measure by Professor E. R. A. Seligman in this *Journal*, vol. XIII, p. 445.

affirmed by the court July 15, 1902. This decision was reversed on the law by the Appellate Division January 23, 1903, by a vote of three to two judges (79 App. Div. 183), on the sole ground that the law was in violation of the home-rule provision of the State constitution, in that it devolved upon the State Board of Tax Commissioners the assessment of property formerly assessed by the local assessors. The State court of last resort, the Court of Appeals, unanimously reversed this decision April 28, 1903, and upheld in every essential particular the opinion of Judge Earl (174 N. Y. 417).

The Supreme Court of the United States unanimously affirmed, May 29, 1905 (25 Sup. Ct. Reporter, 705), the constitutionality of the law on all the points raised against it before the Federal court. It was held that the tax does not impair the obligation of contracts, that it does not deny the equal protection of the law, and that the charters of the companies and special agreements to pay lump sums or annual amounts for franchises do not deprive the legislature of the right to exercise its power of taxation. Many of the "up State" corporations had already paid these taxes under protest, but in New York City about \$24,000,000 had remained unpaid, about a third of which, however, was offset, in accordance with another court decision, by other taxes, such as those on gross receipts. The corporations have nearly all settled promptly since this last decision.

The further development of these three measures of taxation will now be watched with much interest, and will doubtless have much influence upon the legislation of other States.

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THE ORIGIN OF THE PHRASE "BALANCE OF TRADE."

The purpose of this paper is to trace briefly the evolution of the phrase "the balance of trade." No attempt will be made to give, even in outline, a description of the doctrine which ultimately found its expression in this phrase. Nor could it be hoped, even as the result of a most exhaustive investigation, to make certain of all the steps through which the expression was unfolded, much less to give due credit to the real authors of improved phraseology. In political economy, more often than in most sciences, precision and accuracy in the employment of terms are arrived at by a process of elimination, by gradually discarding vague terms as more suitable ones happen to be suggested. The development of the phrase "balance of trade" appears to have been confined to England; and only English writers will be cited.

The idea of the balance of trade was intimately associated with currency disorders. Whenever the mint was idle or the circulating medium was inadequate, men were inclined to look to foreign commerce for explanation and for remedy. Such was the case in 1381 when Parliament was considering the dearth of money. The officers of the mint were called upon to offer explanations for the unsatisfactory state of the currency. One of these officials, Richard Aylesbury, declared:—

Inasmuch as no gold or silver originates in England, but that which is in England is imported from without, we hold that if the merchandise which goes out of England were well regulated, the money which is in England would remain, and a great abundance would come from without. That is to say, provided that no more foreign merchandise were to come into the realm than the value of the native commodities taken out of the kingdom.¹

¹"Qnt a ce q aucun or ne argent ne vent en Engleterre, mes ce q'est en Engl' est emporte p dela, nous entendons, q si la mehandie q va hors d'Engl' soit ba

A century and a half elapsed before monetary difficulties led to a revival of the discussion of foreign trade as England's mine of precious metals. About 1530 or 1535 Clement Armstrong, crudest of early mercantilists, wrote:—

The whole wealth of the realm is for all our rich commodities to get out of all other realms therefor, ready money; and after the money is brought into the whole realm, so shall all the people in the realm be made rich therewith.¹

Hales did somewhat better when, a few years later, he wrote:—

If we keep within us much of our commodities, we must spare many other things that we have now from beyond the seas; for we must always take heed that we buy no more of strangers than we sell them. For he were no good husband that hath no other yearly revenues but of husbandry to live on, that will buy more in the market than he selleth again. And that is a point we might save much by of our treasure in this realm if we would. And I marvel no man taketh heed unto it, what number first of trifles cometh hither from beyond seas, that we might either clean spare, or else make them within our own realm, for the which we pay inestimable treasure every year, or else exchange substantial wares and necessary for them, for the which we might receive great treasure.²

In the first decade of Elizabeth's reign Sir William Cecil, at that time secretary of state, made an appreciable advance in definiteness of statement in trade discussions. Several papers in his handwriting deal with exports and imports in relation to the flow of the precious metals. Some of these state papers are undated, but internal evi-

& justement govne la monoie q est en Engleterre demurra, & gnt plainte de monoie vendra de pt dela, c'est assavoir q plus de mehandie estunge ne veigne deins le Roialme q la value n'est del mehandie denisseins q'est issant p dehors le Roialme." (Signs of contraction are omitted.) *Rot. Parl.*, iii. pp. 126, 127. See also Ruding, *Annals of the Coinage*, 1840, i. p. 241; Cunningham, *English Industry and Commerce* (1896), i. pp. 395, 396; Palgrave, *Dictionary of Political Economy*, article "Balance of Trade," by Stephen Bauer.

¹ *Treatise concerning the Staple and the Commodities of this Realm*, p. 32; printed in the Transactions of the K. Gesellsch. der Wiss., Bd. 23, Goettingen, 1878, edited by R. Pauli, under the title *Drei Volkswirtschaftliche Denkschriften*.

² Hales, *Discourse of the Commonwealth of this Realm of England* (1549), edited by Miss Lamond, 1893, pp. 62, 63.

dence places all of them in the neighborhood of the year 1565.¹ They concern the renewal of commercial intercourse with France and the Low Countries. The questions under consideration were the expediency of using Antwerp as the emporium for English cloths and the desirability of any increase of imports of French wines. Cecil considered both questions in an impartial manner, but in the end inclined to disapprove any "unnecessary" dependence upon foreign trade. On the trade with the Low Countries he wrote:—

It is to be confessed of all men that it were better for this realm, for many considerations, that the commodities of the same were issued out rather to sundry places than to one, and specially to such one as the lord thereof is of so great power as he may therewith annoy this realm. . . . Secondly, it is probable that by carrying over into Antwerp of such a quantity of commodities out of the realm, as of late years is used, the shortness of the return multiplieth many merchants, and so consequently also, this realm is overburdened with unnecessary foreign wares and if the trade thereof should continue but a while, a great part of the treasure of the money of the realm would be carried thither to answer for such unnecessary trifles, considering it is to be seen that very lately the commodities carried out of the realm beyond the seas hath scarcely answered the value of the merchandise brought in; and if the laws for apparel, and taverns for excessive abounding of wines shall not be better observed, it is to be feared that the quantity of our English commodities will be too small a great deal to answer the foreign commodities.²

Cecil goes on to some of the social considerations involved. He recognizes that without a definite mart upon the Continent English cloth manufacture might decline, but he inclines to the opinion that an economic readjustment might be advantageous, for an agricultural population is more easily governed, he thinks, and the poorer and therefore less desirable merchants would be crowded out. He deals with another social problem in a manuscript on the wine

¹ I have examined these manuscripts in the Public Record Office, London. The published calendar of state papers gives them only by title.

² "*Reasons to move a forbearing of the restitution of the Entercourse to Antwerp.*" 1564. State Papers, Domestic, Elisabeth, xxxv. 33. See also xxxiv. 68 and xxxviii. 62. Calendars under the year 1564.

trade. The portion of this document which relates to the monetary question is as follows:—

It is manifest that nothing robbeth the realm of England, but when more merchandise is brought into the realm, than is carried forth, as for example if 800,000 pounds worth of foreign commodities be brought in, and but 600,000 pounds worth of the commodities of England carried forth, the realm must spend upon the stock yearly 200,000 pounds which must be paid with money. And it is manifestly seen already by the customers' accounts in the Exchequer that yearly the foreign commodities do surmount the commodities of the land. The remedy hereof is by all policies to abridge the use of such foreign commodities as be not necessary for us. Whereof the excess of silk is one, of wine and spice is another. And therefore, wittingly to make a law to increase any of these is to consent to the robbery of the realm. Of all these three excesses none is more hurtful to the realm than wine. First, it enricheth France, whose power England ought not to increase. Secondly, for the more part, the wines of France, both those that come from Bordeaux and from Rouen, are bought with sending ready money thither. For in Bordeaux they have an ordinance forbidding bartering with Englishmen for wines. So as whatsoever excess growth in bringing home of wines thereby the gold which is or should be by the merchants brought out of Spain or the Low Countries for the commodities of England, is conveyed into France.¹

Cecil did not coin any new word to indicate the difference between exports and imports of goods, but his language makes it clear that he was referring to this difference when he speaks of "money . . . to answer for such trifles"; and "foreign commodities" which "surmount the commodities of the land"; and "the realm must spend upon the stock yearly 200,000 pounds, which must be paid with money." Crude as is his expression, later writers could only improve upon his nomenclature. The same may be said of his method of exposition, based upon figures drawn from the customs accounts. Later calculations were much more

¹ State Papers, Domestic, Elizabeth (1566?), xli. 58, entitled "The Inconveniences of enlarging any Power to bring any more Wine into the Realm." Cf. Cunningham, *English Industry and Commerce*, 3d ed., vol. ii. p. 71, where this passage is partly quoted, partly paraphrased. It should be noted that the word "balance" there used is not in the original. Cunningham includes also Cecil's remarks upon the evils of drunkenness and the misfortune of displacing ale with wine.

elaborate than Cecil's, but the method itself was used by most of the subsequent writers upon the subject.¹

In 1598 John Stow published the first edition of his *Survey of London*, to which he appended an anonymous Apology of the City of London, "discoursed about twenty years ago" (p. 450). We may therefore fix upon 1578 as the approximate date of the penning of the following passage:—

Seeing we have no way to increase our treasure by mines of gold or silver at home, and can have nothing without money or wares from other countries abroad, it followeth necessarily that if we follow the counsel of that good old husband Marcus Cato, saying *oportet patrem familias vendacem esse, non emacem*, and do carry more commodities in value over the seas, than we bring hither from thence: that then the realm shall receive that overplus in money: but if we bring from beyond the seas merchandise of more value than that which we do send over may countervail, then the realm payeth for that overplus in ready money, and consequently is a loser by that ill husbandry: and therefore in this part great and heedful regard must be had that symmetria and due proportion be kept, lest otherwise either the realm be defrauded of her treasure, or the subjects corrupted in vanity, by excessive importation of superfluous and needless merchandise, or else that we feel penury even in our greatest plenty and store, by immoderate exportation of our own needful commodities.²

Three words in this passage—"overplus," "symmetria," and "countervail"—show an advance in precision of terms.

In 1600 a very important commission was appointed to investigate the causes of England's monetary difficulties, and to propose measures "for the preservation and augmentation of the wealth of the realm." The commission consisted of a dozen men nominated by the lord keeper and the lord treasurer. At least three who signed the re-

¹ One of the earliest of these tables was drawn up in 1570. The values of exports and imports were compared in detail, and the conclusion is: "so is more value of foreign commodities brought into this realm than English commodities shipped out of this realm this year anno 1570 by £18,691 14s. 10d." Titus B. v. fol. 225, 226, in Cotton MSS., British Museum. The tables are published in Hubert Hall's *Customs Revenue*, ii. p. 244, where it should again be noted that the word "balance" is not quoted.

² John Stow, *Survey of London*, 1st ed., 1598, pp. 480 and 465. (These pages are consecutive, the pagination is faulty.)

port were officers of the Mint, one of them being Gerard Malynes, already regarded as an expert in problems of foreign exchange. The report embodied many conflicting ideas, among which those of Malynes can be easily distinguished. Six different explanations were offered for the current monetary evils, and from them we may get an interesting insight into the state of opinion in financial circles at that time. The reasons given were the "over-heaviness of our pound weight troy," the "over-richness of our monies," "the disproportion of the values of gold and silver, the "overbalancing of foreign commodities imported above home commodities vented," the abuse of exchange, and "the not making of foreign commodities in the realm." These reasons were discussed in detail, and under the fourth head the commissioners said:—

Forasmuch as we find there is a great scarcity of gold and silver now in comparison that of late there hath been: Some of us do attribute the same to the said overbalancing of foreign commodities as a chief cause thereof. And some others do rather impute the same to be occasioned partly by reason that the exchange of monies is now become a common trade to the hindrance of traffic in the exportation of our home commodities, and partly by the traffic used to Turkey, whither it is thought our monies are transported, which is likely to be much increased by the now intended voyage to the East Indies, to which place it is thought that our monies will be carried in the nature of bullion, for that the same will make a better return and of far greater value than any of our home commodities that can be sent thither.¹

The word "overbalancing" was probably suggested by Malynes, who used it in a book which appeared almost simultaneously with the report.² The term "overbalance" persisted for a long time after 1601, although Malynes used the verb "balance" as early as 1603, in defending the regulated trade of the merchant adventurers:—

¹ State Papers, Domestic, Elizabeth (1601), colxxix. 97. The published calendar gives this important report in an abridged but substantially accurate form. There are, however, a few errors; as, for instance, "West Indies" is used instead of "East Indies."

² Gerard Malynes, *Center of England's Commonwealth* (published March, 1601), p. 2. See also article on the "Balance of Trade" in Palgrave's Dictionary.

If our merchants were cut off and . . . other nations should buy the cloth within the realm, and so advance the price thereof, (as happeneth most commonly in France and Spain at the vintage time with their wines and raisins), then foreign commodities would be sold dearer unto us by them again. For the small gain had upon our home commodities causeth us, and would cause them to seek a better gain upon the foreign commodities to the general hurt of the realm and to the exhausting of the monies which (to balance the matter) must supply the same.¹

The term "balance" must have been familiar to Malynes in 1601, as indeed to many others who did not happen to employ it with reference to trade matters. The *Lex Mercatoria*, product of "fifty years' observation, knowledge, and experience," shows that Malynes was interested in mercantile accounting, and he here used the word "balance." Though this book was not published until 1622, it is altogether likely that he had paid attention to accounting long before this; and in connection with private ledgers the word was in common use earlier than 1600.² It may be assumed, then, that Malynes simply transferred the expression from private to public transactions, and that it slowly found acceptance in economic discussion as a figure of speech by which the trade of nations was metaphorically represented as a long series of debits and credits between countries, finally settled by a small cash transaction.

A few years later the full expression "balancing of trade" appears. To be sure, there is an adjective before the word "trade," but the context shows it is unimportant.³ In

¹ *England's View in the Unmasking of Two Paradoxes*, p. 87.

² See *The New English Dictionary*, i. p. 631, col. 3: "The balance of your book is to be understood a leaf of paper disposed and made in lengths, and crossed in the middles. . . . If the sums of money of debtor and creditor be like, then is your balance well." Quoted from John Mellis, *Brief Instr.*, 1558, F. viii. b. An earlier edition in the British Museum frequently refers to "ready money" "to balance the barter." John Mellis, "of Southwark, Schoolmaster," *The Ground of Arts, Teaching the Perfect Work and Practice of Arithmetick, made by M. Robert Record, D. in Physicks, and afterwards augmented by M. John Dee*.

³ Even Mun rarely, if ever, used the term "balance of trade" without an adjective interpolated before the word "trade." Mun's constant expression "balance of foreign trade" was an unnecessary nicety, showing that as late as 1630, when *England's Treasure by Foreign Trade* was cast into its final form, the term "balance of trade" was not universally recognized as the one natural expression to adopt. In 1621, in the *Discourse of Trade from England unto the East Indies*, Mun clung to the word "overbalance," to the entire exclusion of "balance of trade."

the early years of the reign of James I. there was considerable discussion on the expediency of reviving the statutes of employments, and, as it was an age of projects and monopolies, it was natural that two countrymen of the king should petition for the office of exclusive hosting and brokerage; that is, of entertaining foreign merchants in England, and supervising their dealings in such a way that the proceeds of their sales should be "employed" upon English commodities, and produce and not coin should be exported. This petition of the Hon. Patrick Leslie, Lord of Lunsdore, and Sir Robert Stewart, Kt., came before the Privy Council, whence it was referred to the chancellor of the Exchequer, the lord chief baron of the Exchequer, the attorney-general, and one other. The petition, with the reference, is indorsed in the handwriting of Sir Julius Cæsar, and dated by him "8 March, 1606." The petition runs:—

To the king's most excellent Majesty. The humble petition [etc.] Most humbly beseeching your royal Majesty out of your princely disposition in regard of your present estates, and that as yet we never obtained any benefit by any suits. In regard thereof we are the rather emboldened at this time to beseech your Majesty's gracious favor in bestowing upon us the office of the executing of the statute provided for all strangers dealing by way of merchandise to make their employments in commodities within the land for the rescountring¹ or balancing of such trade as either by commodity they bring into the kingdom, or otherwise by such monies as they shall receive or may receive within the land by any course of exchange; to the end that coin may still abide within your majesty's realm, it being the only means to prevent their secret and disordered practices from conveyance of the monies of this kingdom.² . . .

¹ Cf. Italian, *riscontro*=comparison or counterpart, and *riscontrare*=to agree, tally, or compare. On the use of "skontation," "scontrare," and "riscontrare" on the Continent before the seventeenth century, consult Goldschmidt, *Handbuch des Handelsrechts*, 1891, i. 328, note 100. Malynes used the expression in 1622 when he wrote of two remittances of money which "might, by way of rescounter, answer each other in account." *Maintenance of Free Trade*, p. 92; *Lex Mercatoria*, p. 421. The word is not found in any form in Johnson's, Bailey's, Halliwell's, the Middle English, or the Century Dictionary. W. A. Craigie, Esq., of The New English Dictionary, informs me that the noun was frequently used as a stock exchange term in the latter half of the seventeenth and in the eighteenth century.

² British Museum MSS., Cæsar Papers, Lansdowne Collection, vol. clii., fol. 220, 221.

The overbalance of imports, to which was ascribed the monetary stringency, served as a convenient argument in the attempt to popularize a new fiscal expedient. The new impositions or customs duties which had been levied without the sanction of Parliament after the favorable legal decision in Bate's case had called forth a storm of protests, but it was argued in the House of Commons in 1610 that it was legitimate for the king to "impose to keep the balance even between himself and foreign princes, agreeably to state policy and law."¹ In 1615 Sir Lionel Cranfield, surveyor-general of the customs, led a movement to amend the Book of Rates with special reference to the "inequality of trade."² To support his project, he prepared a statement of England's foreign trade computed upon the basis of "custom outward" and "custom inward" for the preceding ten years. His statement was entitled "Sir Lionel Cranfield his balance of trade."³ After making certain corrections according to assumed bases of error in the returns, he concluded that the yearly "import is more than the export by £34,000 at least."⁴ The project was at once given a hearing by the Privy Council, and further investi-

¹ Gardiner, *Parliamentary Debates in 1610* (Camden Society Publications, 1862), p. 85.

² "For the matter of Impositions, which though at first it might perhaps have been easily stopped, yet now cannot possibly be blanced or passed over, I do allow well the proposition of Sir Lionel Cranfield, being more indeed than I could have looked for in a man of his breeding, which is that the revenue by the late Impositions raised, be turned without diminution and perhaps with increase, into raising of rates, not upon the same things, but where it shall be best for the advantage of the kingdom and the disadvantage of the stranger, and that it may be so handled that it be not done directly as a laying down of Impositions, but in respect of advancing the exportation above the importation. . . . It will remove the question of imposing, and turn it into a nature of revenue that cannot be questioned in point of law." Bacon to the king, Spedding's *Letters of Bacon*, v. 187.

³ The manuscript is also indorsed by Sir Julius Cæsar, master of the rolls, "Sir Lionel Cranfield his balance of trade 21 May 1615." Lansdowne MSS., 152, fols. 180-182. Seemingly, this is the earliest document preserved in which the exact phrase which we are considering is found, but, so far as I know, it has been overlooked, although the indorsement is quoted in the published calendar of the Lansdowne collection.

⁴ John Wolstenholme, however, who assisted in the preparation of the tables, held that the exportation and importation were equal. Lansdowne MSS., 152, fol. 196.

gation was ordered.¹ Finally, a commission of merchants, headed by Cranfield, was appointed,² to the end "that some alteration be made in the Book of Rates, whereby an ease will follow to his Majesty's subjects in taking away some part of the Impositions and yet without overmuch loss to his Majesty's revenue."³

Cranfield's commission continued to report from time to time, until it was replaced by the Standing Commission on Trade. Both the king⁴ and the committee of the House of Commons⁵ ascribed the scarcity of coin to the "unequal balancing of trade," and the new commissioners were instructed to inquire into "the true balance of the trade of

¹"Upon consideration taken by their lordships of the inequality of trade and the balancing of the exportation of the native commodities of this realm to the importation of foreign commodities, and debated at the board by Sir Lionel Cranfield Kt. and Mr. Wolstenholme, it is ordered that Sir Fulk Grevil Kt., chancellor of the Exchequer, and Sir Thomas Lake Kt., calling before them such merchants and others as they shall think fit, shall upon Tuesday next hear at large that which shall be offered by Sir Lionel Cranfield and Mr. Wolstenholme for the clear information of the true state of that cause." Council Register, 1 June, 1615 (in the Privy Council Library, London). See also Spedding, *Letters of Bacon*, v. 194 ff., where the Harleian MS. 4289, 224b, is reproduced: "Consultation and Preparation for a Parliament at Whitehall the 24th of September, 1615, by the Lords of the Council."

²Council Register, January 5, 1616. See also Unwin, *Industrial Organisation of the Sixteenth and Seventeenth Centuries*, pp. 184, 185.

³It was several months later that Bacon wrote to Villiers, the new favorite: "For the matter of trade, I confess it is out of my profession, yet in that I shall make a conjecture, also, and propound some things to you, whereby (if I am not much mistaken) you may advance the good of your country and profit of your Master. (1) Let the foundation of a profitable trade be thus laid, that the exportation of home commodities be more in value than the importation of foreign so as we shall be sure that the stocks of the kingdom shall yearly increase, for then the balance of trade must be returned in money or bullion." Spedding, *Letters of Bacon*, vi. 22-24. Oncken (*Geschichte der Nationalökonomie*, i. p. 216) writes of the letter to Villiers, "Hier ist es, wo neben dem Ausdruck 'balance of greatness' auch derjenige 'balance of trade' zum ersten Mal in der Literatur, soweit sich das nachweisen lässt, auftritt." The letter, however, was not written as early as 1615, the date given by Oncken, and was not published until 1661. See Spedding's introduction to the letter. Bacon may have heard the expression from his friend, Sir Julius Caesar. In any case the letter cited on p. 165, note 2, shows that Bacon had paid attention to Cranfield's suggestion.

⁴"It's strange that my Mint hath not gone this eight or nine years, but I think the fault of this want of money is the uneven balancing of trade." *Parl. Hist.*, i. 1179, 1180. See Ruding, *Annals of the Coinage*, i. 376.

⁵"Master of the Wards reporteth from the committee for Scarcity of Coin—Unequal balancing of trade." *Commons Journal*, 13 March, 1621.

this kingdom, . . . to think upon the gain or loss . . . by the course of exchange," and to ascertain the influence of the trading companies upon the supply of specie.¹ The investigations of the commissions stirred up the pamphleteers who popularized the notion that the wealth of a nation which did not produce the precious metals depended upon the general balance of its exports and its imports, and who first put into public print the expression "balance of trade."²

W. H. PRICE.

HARVARD UNIVERSITY.

¹ Commission [October 20, 1622. Reproduced in Rymer's *Federa*, xvii. p. 410-415.

² The first book in which the phrase was used was published in 1623.—Edward Misselden, *The Circle of Commerce or the Balance of Trade, in Defence of Free Trade*, dedicated to Cranfield. The author describes the balance of trade as "an excellent and politic invention, to show us the difference of weight in the commerce of one kingdom with another in the scale of commerce" (pp. 116, 117.) The fullest account of the pamphlet literature of this discussion is by W. A. S. Hewins, *English Trade and Finance in the Seventeenth Century* (1892), pp. xx-xxxiv.

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LAWRENCE (F. W. P.). Measures that should accompany Land Taxation. *Ind. Rev.*, Sept. [Works out some of the necessary administrative details of the single tax.]

PRIBOLERI (A.). Le condizioni del salariato agricolo in provincia di Cagliari. *I. Giorn. degli Econ.*, Aug.

RUDLOFF (H. L.). Studien über den Pariser Getreidehandel. Die Monatspreise des Getreides in Paris unter dem Einfluss der

Börse. Jahrb. f. Nat. Oek., Aug. [Holds that speculation regularly influences wheat prices, and in less degree the prices of other cereals, to the disadvantage of the grower.]

SAMSON-HIMMELSTJERNA (K. v.). Die neuere Agrargesetzgebung in Livland, mit Ausblicken auf

Agrargesetzgebung und Agrarverhältnisse in Deutschland. Zeitschr. f. Socialw., May, June, July.

SHERMPTON (R. J.). Land Settlement System in Canada. Nat. Rev., August. [Criticises the present method of disposing of the public lands as "thrifless and unsatisfactory."]

V. POPULATION AND MIGRATION.

PARAGGIANA (G.). L'emigrazione: studio economico legislativo. Empoli. 1905. 16mo. pp. 249. 2.50 l.

GUILLON (J.). Étude d'économie rurale et sociale. L'émigration des campagnes vers les villes et ses conséquences économiques et sociales. Paris: Rousseau. 1905. 8vo. pp. 598. 12 fr.

KELLER (Fr.). Bevölkerungspolitik und christliche Moral. Freiburg i. B. 1905. 8vo. pp. 213. 8 m. [Published by the Charité-Verband für das katholische Deutschland.]

In Periodicals.

BENEDUCE (A.). Capitali personali e valore economico degli emigranti. Giorn. degli Econ., July. [A defence of Engel's method against Coletti's criticism.]

CARLYLE (M.). The Birth-rate (1905). Westm. Rev. [Argues that a declining birth-rate is not to be deplored.]

CASTIGLIONE (G. E. di P.). Italian Immigration into the United States. Amer. Journ. Sociol., Sept. [A valuable statistical study with discriminating discussion.]

COLETTI (F.). Ancora del costo di produzione dell' uomo e del valore economico degli emigranti. Giorn. degli Econ., Aug. [A reply to criticisms.]

FEHLINGER (H. U.). Das Einwanderungsproblem in den Vereinigten Staaten. Archiv f. Rassen- und Gesellschafts-Biologie, Heft 3, 1905. [A brief statistical article. Finds the strict exclusion of undesirable immigration justifiable.]

NITTI (F. S.). Il bilancio dell' emigrazione. Riforma Soc., July. [A speech before the Italian Parliament in furtherance of unrestricted emigration.]

PRINZING (F.). Die kleine Sterblichkeit des weiblichen Geschlechts in den Kulturstaaten und ihre Ursachen. Archiv f. Rassen- und Gesellschafts-Biologie, Heft 2 and 3, 1905.

RAUCHBERG (H.). Ueber die Entwicklung der Bevölkerung Böhmens im 19. Jahrhundert. Mitteilungen des Vereins für Geschichte der Deutschen in Böhmen, 1905, No. IV.

SAMUEL (Herbert, M.P.). Immigration. Econ. Journ., Sept. [An essay on the restriction of immigration. No universal rule can be laid down: in case of uncertainty the presumption should be for freedom.]

SCHOLEFIELD (Guy H.). The White Peril in Australia. Nineteenth Cent., Aug. [An arraignment of the Australian policy of excluding alien races.]

VI. TRANSPORTATION.

BEHRENS (H. O.). Grundlagen der Entwicklung der regelmässigen deutschen Schifffahrt nach Südamerika. Halle: Gebauer. 8vo. pp. 188.

[A study of the growth of German shipping in this direction,

with an account of the general trade conditions, foreign rivals, probable effects of the Panama canal. Published in a series of Hefte angewandter Geographie, edited by K. Dove.]

GRIFFON-LAMOTTE (L.). Histoire

- du réseau des chemins de fer français. Paris: Dunod. 1905. 8vo. pp. 546. 7.50 fr.
- GROSSCUR (P. S.). A Simple and Sure Solution of the Transportation Problem. New York: Freight Pub. Co. 1905. pp. 22.
[Proposes a separate court to deal with transportation problem.]
- HAINES (H. S.). Restrictive Railway Legislation. New York: Macmillan. 1905. 8vo. pp. 355. \$1.25.
[Contains twelve lectures, by an experienced railroad manager, upon railway organization, management, and control. "The obvious policy is to recognize, as a fundamental principle, private ownership under government supervision, corresponding to the public nature of the functions that the corporations are expected to discharge."]
- MEYER (H. R.). Government Regulation of Railway Rates: A Study of the Experience of the United States, Germany, France, Austria, Hungary, Russia, and Australia. New York: Macmillan. 1905. 8vo. pp. 513. \$1.50.
[A book showing thorough investigation, wide information, and independent judgment; to be reckoned with in future discussion. The conclusion is uncompromisingly against government regulation in any form. The author is assistant professor at the University of Chicago.]
- NEWCOMB (H. T.). The Regulation of Interstate Railways. Washington: B. S. Adams. 1905. 8vo. pp. 23.
[Opposes further regulation.]
- . Who own the Railroads? Washington: Crane Company. 1905. 8vo. pp. 13.
[A study of the distribution of stock ownership.]
- . Railway Rate Regulation in Foreign Countries. Washington: G. E. Howard. 1905. 8vo. pp. 33.
[Draws conclusions unfavorable to regulation.]
- . The Federal Courts and the Orders of the Interstate Commerce Commission. Washington: Gibson. 1905. 8vo. pp. 206.
[A review unfavorable to the Commission.]
- RENTY (E. de). Les chemins de fer coloniaux en Afrique. Troisième partie. Chemins de fer dans les colonies françaises. Paris: Rudeval. 1905. 18mo. pp. 530. 5 fr.
- VEREIN FÜR SOZIAL-POLITIK. Die Schifffahrt der deutschen Ströme: Abgabenwesen, Regulierungskosten, Verkehrsverhältnisse. 3 Band: Beiträge von W. Nasse, F. Schulte, A. Wirminghaus. Leipzig: Duncker & Humblot. 1905. 8vo. pp. 565. 12.20 m.
- WIEDERMANN (C. P.). Die geschichtliche Entwicklung der schweizerischen Eisenbahngesetzgebung. Zürich: Schulthess. 1905. 8vo. pp. 116. 2.40 m.
- In Periodicals.*
- ACHARD (A.). Le rachat des chemins de fer en Suisse. Rev. d'Econ. Pol., Aug., Sept. [In general, opposed to government ownership.]
- BRESCIANI (C.). Die Eisenbahnfrage in Italien. Archiv f. Eisenb., Sept., Okt. [An authoritative statement of the results of the Italian leases of 1885 and the present situation at their conclusion.]
- BURPEE (L. J.). How Canada is solving her Transportation Problem. Pop. Sci. Monthly, Sept. [An interesting descriptive article.]
- CAVALIERI (G.). La riforma della tariffa postale in Italia. Riforma Soc., June.
———. Riforma delle tariffe telegrafiche. Riforma Soc., Aug.
- DIXON (F. H.). Publicity for Express Companies. Atlantic Monthly, July. [Calls attention to the inadequate publicity in a common carrier service.]
- RIPLEY (W. Z.). President Roosevelt's Railway Policy: I. The Problem; II. Remedies. Atlantic, Sept., Oct. [The "Problem" is relatively unreasonable rates, of which examples are freely given. Among the "Remedies," the chief is to so increase the Interstate

Commerce Commission's power that its rates shall obtain until passed upon by the judiciary.]

——. Changes in Railroad Conditions since 1887. The World's Work, Oct. [A comparison of conditions in 1887 and 1905 as bearing upon legislation.]

SCHMIDT (A.). Die Tarife der deutschen Reichs-Post- und Telegraphenverwaltung. Finanz-Ar-

chiv, 22, 2. [An exhaustive investigation.]

SCHMIDT (G. H.). Die Oberrheinschiffahrt. Ann. des Deutsch. Reichs, 1905, 7 and 8. [Treats the history, methods of improving, and regulation of this traffic.]

TAJANI (P.). L'exploitation par l'état des chemins de fer italiens. Rev. Econ. Intern., Aug.

VII. FOREIGN TRADE AND COLONIZATION.

BOWLEY (A. L.). England's Foreign Trade in the Nineteenth Century. Revised edition. London: Swan, Sonnenschein. 1905. 12mo. pp. 165. 2s. 6d.

[A revised edition of a useful sketch of the development of English commerce and policy during the period in question. The revision is intended to place the volume abreast of current discussions of the fiscal question.]

HOFFMAN (P.). Die deutschen Kolonien in Transkaukasien. Berlin: D. Reimer. 1905. 8vo. pp. 302. 6 m.

[An interesting account of certain colonies, founded in Trans-Caucasia in 1816-17 by Württemberg emigrants, and still flourishing.]

LEQUX (H.). Les zones franches de la Haute-Savoie et du pays de Gex. Paris: Larose. 1905. 8vo. pp. 147. 4 fr.

MEEKER (R.). History of Shipping Subsidies. Pub. of Amer. Econ. Assoc., 1905. New York: Macmillan. 1905. 8vo. pp. 229.

[A careful investigation of the history and working of subsidies in all countries. The author's conclusion is unfavorable to subsidies.]

PALLAIN (J.). Les changes étrangers et les prix. Paris: Guillaumin. 1905. 8vo. pp. 170.

[Traces the history of and reviews recent attacks upon the current theory of the equilibrium of the international exchanges. Then undertakes an extensive examination of facts concerning the world's

commerce. Concludes that the facts tend to support the current theory.]

RAFFALOVICH (A.). Le commerce entre la France et la Russie, 1887-1905. Statistique comparée. Paris. 1904. 8vo. pp. 191.

REINSCH (P. S.). Colonial Administration. New York: Macmillan. 1905. 12mo. pp. 422. \$1.50.

[Aims to present the chief problems confronting colonial governments and the methods thus far adopted of solving these problems. Most of the space is devoted to economic problems.]

SCHWAB (Marie). Chamberlain's Handelspolitik. Mit einleitenden Vorwort von Prof. Dr. Adolf Wagner. Jena: G. Fischer. 1905. 8vo. 3 m.

SMITH (J. R.). The Organization of Ocean Commerce. [Publication of University of Pennsylvania, No. 17.] Philadelphia: Univ. of Penn. 1905. 8vo. pp. 155.

[A thorough investigation of an important subject.]

TERREL (H.) et LEJEUNE (H.). Traité des opérations commerciales de banque. Paris: Masson. 1905. 8vo. pp. 562. 8 fr.

WILLIS (H. P.). Our Philippine Problem. New York: Henry Holt. 1905. 12mo. pp. xiii, 479.

[A valuable work. Gives results of author's personal investigations, and from an unofficial point of view. Devotes much attention to social, economic, and financial conditions.]

In Periodicals.

BENINI (R.). *Politica doganale.* Riforma Soc., July. [A communication to the recent congress of the Italian radical party. Advocates tariff reform, with the continuance of protection to the marginal industries.]

CARLYLE (W. W.). *The Double Exchange Theory.* Econ. Rev., July. [Attacks the doctrine that domestic trade is more profitable than foreign.]

CARRYER (A. P.). *Protection and the Unemployed.* Westm. Rev., July. [Demolishes the argument that protection increases employment.]

DAWSON (W. H.). *The German Workingman and Protection.* Contemp. Rev., Oct. [Shows the consequences of agrarian protection to be almost tragic.]

DIETZEL (H.). *Die "enorme Ueberschuss" der Vereinigten Staaten.* Jahrb. f. Nat. Oek., Aug. [An able anti-protectionist analysis of our "favorable balance of trade."]

DIGBY (W. P.). *The Engineering Import Trade of Canada.* Westm. Rev., Aug. [Sub-title, "Imports and Incidence of the Tariffs."]

EWART (J. S.). *Mr. Chamberlain's Proposals and Canada.* Monthly Rev., Sept. [Rejects the idea of a united empire, but provisionally indorses a scheme for preferential tariffs.]

FOLLETT (C. J.). *The Revenue Aspects of Fiscal Reform.* Nat. Rev.,

Sept. [A spread-eagle appeal to the "big England" sentiment.]

GIRETTI (E.). *La politica delle libere importazioni.* Giorn. degli Econ., Aug. [An uncompromising free-trade advocacy.]

HAMILTON (W. D.). *Free Trade v. Protection.* Westm. Rev., Aug. [A free-trade view.]

HOBSON (J. A.). *Occupations of the People.* Contemp. Rev., Aug. [Discusses particularly the relation of the foreign trade to general industry.]

LUBENSKY (F.). *Der zollfreie Veredlungsverkehr in Oesterreich-Ungarn und der Schweiz.* I. Zeitschr. f. Socialw., Aug.

PIEQU (A. C.). *Professor Dietzel on Dumping.* Econ. Journ., Sept. [A critical examination of certain theoretical arguments advanced by Dietzel in the *Economic Journal* and in his book on *Vergeltungszölle*.]

SNOWDEN (J. K.). *Corn Law Memories.* Contemp. Rev., July. [First-hand accounts gathered by the author from men who lived through the later period of the corn-laws.]

WILSON (D. A.). *Restatement of Economic Tendencies.* Westm. Rev., Aug. [Discusses protectionism.]

— *Fair Trade—What is it?* Westm. Rev., Sept. [Shows that this expression, as used by the protectionist, is devoid of meaning.]

VIII. MONEY, BANKING AND EXCHANGE.

PIEKENBROCK (C.). *La loi allemande sur les bourses.* Essen: W. Giradet, 1906. 8vo. pp. 209. [A careful study of the German law of 1896. A dissertation presented to the faculty of law of the University of Lausanne.]

In Periodicals.

BAILLAUD (E.). *La question monétaire en Afrique occidentale.* Ann. des Sci. Pol., Sept. [Favors the introduction of a gold standard in the French and English colonies in West Africa.]

CARLYLE (W. W.). *The Origin of Money from Ornament.* [Uses the anthropological method.]

GOLODETZ (M.). *Staatsaufsicht über die Hypothekenbanken.* Technik und Umfang. I. Jahrb. f. Gesetzg., 1906, Heft 8.

LAUGHLIN (J. L.). *Present Monetary Problems.* Pop. Sci. Monthly, July. [Raises a number of questions, and contends that the whole theory of money is in an unsettled state.]

LEVY (R. G.). *Les grands marchés financiers.* Rev. Econ. Intern.,

- Sept. [Reviews the financial centres and their international relationships.]
- MACROSTY (H.). Speculation in the Iron Market. *Econ. Journ.*, Sept. [A detailed examination of a particular "gamble" in warrants, in 1904-05, leading to the conclusion that the warrant system "is unnecessary, and, unless retained for gambling, will shortly disappear."]
- STEINBACH (R.). Die Verwaltungskosten der Berliner Grossbanken. II. *Jahrb. f. Gesetzg.*, 1905, Heft 3.
- STEINER (K.). Zur Geschichte der Württembergischen Vereinsbank (1869-88). *Jahrb. f. Gesetzg.*, 1905, Heft 3. [The author was the founder of the Württemberg bank, an influential director of the Deutsche Bank of Berlin, and the first to lead in the movement for bank amalgamations in Germany.]
- VEBLEN (Thorstein). Credit and Prices. *Journ. Polit. Econ.*, June. [Discusses from a new standpoint the relation of credit to the general price level.]

IX. FINANCE AND TAXATION.

- CARANO-DONVITO (G.). Trattato di diritto penale finanziario. I. Parte teorica. Turin, Rome: Roux & Viarengo. 1904.
- FLORA (F.). La conversione della rendita. Milan. 1905. pp. 46. 1.50 l.
- GRAF (F.). Das Problem der Luxussteuern. Berlin: C. Heymann. 1905. 8vo. pp. 298. 6 m.
- LÉVI (H. J.). Étude économique, financière, et juridique de la convertibilité des emprunts en obligations amortissables. Paris: Recueil Livy. 1905. 8vo. pp. 290. 5 fr.
- MEYER (Dr. H.). Die Einkommensteuerprojekte in Frankreich bis 1887. Berlin: C. Heymann. 1905. 8vo. pp. 202. 4 m.
- ONTARIO, Province of. Report of the Ontario Commission on Railway Taxation. Toronto: Printed by L. K. Cameron. 1905. 8vo. pp. 219.
[A thorough document, by Messrs. Pettypiece and Bell and Professor Shortt, examining with care the systems of taxation in various American States as well as in Canada. The final recommendation is for a tax on the basis of gross earnings.]
- PLEHN (C. C.). The Plan for Tax Reform in California. San Francisco: Privately printed. 1905. pp. 19.
[Advocates plan for separation of sources of state and local revenue.]
- VIGNALI (G.). Del reato cosiddetto fiscale. Lineamenti di una nuova teoria del diritto penale finanziario. Brescia: F. Apollonio. 1905.
- ZIMMERMAN (L. W.). Taxation of Land Values. Manchester: H. Elverston. 1905.
[An interesting account of the movement to change the basis of English local rates from the letting value of real property to land values.]

In Periodicals.

- BARTHÉLEMY (J.). La solution de la question des majorats. *Rev. de Sci. et de Lég. Fin.*, 3, 2. [A brief article on the reform effected by the law of 1905.]
- BLANCHARD (G.). Des modifications apportées à la situation financière de l'Égypte par l'accord franco-anglais de 1904. *Rev. de Sci. et de Lég. Fin.*, 3, 3. [An extended study of Egyptian finance.]
- BRESCIANI (C.). Die Reform des Lokalsteuersystems in Italien. *Finanz-Archiv*, 22, 2. [A review of the history of local taxation in Italy, an account of various attempts to reform the system, a description of the law of 1902 and its operation.]
- DUCHÊNE (A.). Un système budgétaire dans les colonies françaises. *Rev. de Sci. et de Lég. Fin.*, 3, 2. [A brief article on French colonial finance.]

- DUNRAVEN** (Earl of). Ireland's Financial Burden. Nineteenth Cent., July. [Shows that the burden of taxation in Ireland is out of proportion to that of England, and that it is increasing.]
- GERLACH** (W.). Die Wirkungen der deutschen Börsensteuer-gesetzgebung. Zeitschr. f. d. ges. Staatsw., Heft 3. [A careful treatment of the subject. Advocates a reduction of the tax.]
- GIORDANO** (L.). La riforma dei tributi locali specialmente in rapporto alle provincie. Riforma Soc., June. [An address before the second congress of Italian provinces.]
- HOOK** (A.). The Present Position of the Land Tax. Econ. Journ., Sept. [A good brief description, showing the anomalous and incongruous position of the tax, and proposing a plan for its extinction.]
- HOWGRAVE** (W.). A Sociological View of Taxation. Westm. Rev., Sept. [The sociological view is that "in which economic principles are fully regarded, while the object of social advancement is placed in the forefront and financial arrangements are brought into harmony with the essential principle that social advancement is the factor of first importance."]
- JAMIESON** (J.). A Defence of Local Expenditures. Westm. Rev., Aug.
- KOCZYNSKI** (S.). Vom Ursprunge der Stempelpapierabgabe. Finanz-Archiv, 22, 2. [An elaborate study, based on the investigation of Riemsdijks, of the genesis of the Dutch stamp tax of 1624.]
- NEUMANN** (F. J.). Die Aktien- und ähnlichen Gesellschaften als Rechts- und als Subjekte. Ann. des Deutsch. Reichs, 1905, 6 and 8. [Favors separate taxation of corporations, and offers leading principles for such taxation.]
- OFFENBÄCHER** (A.). Geschichte der Besteuerung des Salzes in Deutschland bis zum Jahre 1867. (Continuation.) Finanz-Archiv, 22, 2.
- ROSSI** (G.). Le scritture della ragioneria generale dello stato. Riforma Soc., Aug. [The author, intendant of finance at Reggio, discusses some phases of public accounting.]
- ROSSITER** (W. S.). The Problem of Federal Printing, Atlantic, Sept. [An account, largely statistical, of the Government Printing-office, with information as to the costliness of its work and of the high wages paid to employees.]
- SELIGMAN** (E. R. A.). Pending Problems in Public Finance. Pol. Sci. Quart., Sept. [A paper read before the St. Louis Congress of Arts and Sciences, surveying the general tendencies and problems of modern times.]
- SPECTATOR**. Di alcuni indici del movimento economico in Italia. Riforma Soc., June. [Shows the increase in the yield of certain taxes, such as those on tobacco, salt, and on business transactions.]
- WARSCHAUER** (O.). Die deutsche Börsensteuer und die Versuche ihrer Umgestaltung. Jahrb. f. Nat. Oek., July. [Urges reform of the tax.]
- WOLLENIK** (J.). Die Enquete über die Reform der Gebäudesteuer in Oesterreich. Finanz-Archiv, 22, 2. [A lengthy review of an official investigation made in 1903.]

X. CAPITAL AND ITS ORGANIZATION: COMBINATIONS.

- BALBI** (D.). I sindacati industriali e commerciali e l'azione dello stato per un ordinamento legislativo dei sindacati industriali e commerciali. Brescia: G. Cittadini. 1905. 8vo. pp. 131. 2.50 l.
- KOLLMANN** (J.). Der deutsche Stahlwerksverband. Eine Studie auf Grund eigener Wahrnehmungen. Berlin: Pan-verlag. 1905. 8vo. pp. 53. 1 m.
- [Published in the series of *Moderne Zeitfragen*, edited by H. Landsberg. The author, an engineer, gives a good account of the German Steel Combination.]

NEWCOMB (H. T.). *Municipal Socialism.* Washington: G. E. Howard. 1905. 8vo. pp. 50.

[An attack upon municipal ownership.]

PANNIER (G.). *L'autorisation et la surveillance des sociétés d'assurance sur la vie en France et à l'étranger.* Paris: Dulac. 1905. 8vo. pp. 469. 8 fr.

THÉATE (T.). *Les sociétés anonymes. Abus et remèdes.* Paris: Giard et Brière. 1905. 16mo. 2.50 fr.

In Periodicals.

DAWSON (M. M.). *Assessment Life Insurance and Fraternal Life Insurance.* Ann. Amer. Acad., Sept.

FEDÉ (R. della). *Il nuovo disegno di legge sull'esercizio delle operazioni di assicurazioni.* Giorn. degli Econ., July.

FOUSE (L. G.). *The Organization and Management of the Agency System.* Ann. Amer. Acad., Sept.

GIBB (J. H.). *The Calculation of Life Office Premiums.* Ann. Amer. Acad., Sept.

HAMER (J. W.). *Life Insurance Investments.* Ann. Amer. Acad., Sept.

HOFFMAN (F. L.). *Industrial Insurance.* Ann. Amer. Acad., Sept.

HUEBNER (S.). *The Development and Present Status of Marine Insurance in the United States.* Ann. Amer. Acad., Sept.

JEFFRIES (J. H.). *Lapse and Reinstatement (on Insurance).* Ann. Amer. Acad., Sept.

LIEFMANN (R.). *Die Erwerbung der Hibernia Gesellschaft durch den preussischen Staat.* Ann. des Deutsch. Reichs, 1905, 6. [Considers effect of action of the government on the coal industry.]

LIPPENCOTT (H. C.). *The Essentials of Life Insurance Administration.* Ann. Amer. Acad., Sept.

NINA (L.). *La municipalizzazione del servizio tranviario nella capitale.* Giorn. degli Econ., Sept.

OVIATT (F. C.). *Historical Study of Fire Insurance in the United States.* Ann. Amer. Acad., Sept.

WILLETT (A. H.). *The Cost of Life Insurance.* Pol. Sci. Quart., Sept. [A good brief account of the theory of insurance rates, with a table showing financial results for various companies, and a conclusion that premiums are needlessly high.]

WOLFE (S. H.). *State Supervision of Insurance Companies.* Ann. Amer. Acad., Sept.

XI. ECONOMIC HISTORY.

AGATS (A.). *Der hansische Balenhandel.* (Heidelberger Abhandlungen zur mittleren und neueren Geschichte, Heft 5.) Heidelberg: K. Winter. 1904. 8vo. pp. 130.

[A study of the mediæval salt trade.]

COMAN (KATHERINE). *The Industrial History of the United States.* New York: Macmillan. 1905. 8vo. pp. 385.

[A carefully prepared text-book for high schools and colleges, covering the whole period from the origins to the present, equipped with bibliography, illustrative readings, maps, illustrations. The limited space precludes any exhaustive treatment. The author is professor in Wellesley College.]

ENGEL (H.) et LEBBURE (R.).

Traité de numismatique du moyen âge depuis l'apparition du gros d'argent jusqu'à l'apparition du thaler. Paris: Leroux. 1905. 8vo. 15 fr.

LUNCHIN v. EBENGREUTH (A.). *Allgemeine Münzkunde und Geldgeschichte des Mittelalters und der neueren Zeit.* Munich and Berlin: R. Oldenbourg. 1904. 8vo. pp. 303.

MELLOTTÉE (P.). *Histoire économique de l'imprimerie. Tome I. L'imprimerie sous l'ancien régime, 1439-1789.* Paris: Hachette. 1905. 8vo. 7.50 fr.

[Considers the development of the printing trade in its economic aspects, the systems of apprenticeship, wages, strikes, etc.]

STRICKER (J.). *Die Inventur der*

Firma Fugger aus dem Jahre 1527. Tübingen: H. Laupp. 1905. 8vo. pp. 139. 3.60 m.

[The text of the inventory, edited, with introduction. Published as supplement to the Zeitschr. f. d. ges. Staatswissenschaft, at a reduced price to subscribers.]

In Periodicals.

CROMBIE (J. W.). A Fiscal Reformer of Cervantes' Time. Nineteenth Cent., Sept. [An account of the remarkable administration of Francisco Arias de Bobadilla, of Seville, based upon a recently discovered diary of one Francisco Ariño.]

DARMSTÄDTER (P.). Studien zur napoleonischen Wirtschaftspolitik. II. Ueber die auswärtige Handelspolitik Napoleons I. Vierteljahrschr. f. Soc. u. Wirtschaftsgesch., 1905, Heft 1.

FROIDEVAUX (H.). Le commerce français à Madagascar au XVII^e siècle. Vierteljahrschr. f. Soc. u. Wirtschaftsgesch., 1905, Heft 1.

GRIMONARD (H. de). Les bureaux des finances de l'ancien régime. Rev. de Sci. et de Lég. Fin., 3, 3. [A detailed investigation of the origin, organization, and func-

tions of the bureaux up to the time of the Revolution.]

HÄPKE (R.). Die Entstehung der grossen bürgerlichen Vermögen im Mittelalter. Jahrb. f. Gesetzg., 1905, Heft 3. [An examination of Strieder's criticism of Sombart's "Grundrententheorie."]

LODGE (Miss). Serfdom in the Pyrenees. Vierteljahrschr. f. Soc. u. Wirtschaftsgesch., 1905, Heft 1.

PEISKER (J.). Die älteren Beziehungen der Slawen zu Turkotaren und Germanen und ihre sozialgeschichtliche Bedeutung. Vierteljahrschr. f. Soc. u. Wirtschaftsgesch., Heft 2. [An important paper.]

PRINHAM (K.). Die Einführung der Schutzdekrete unter Karl VI. in Wien. Jahrb. f. Gesetzg., 1905, Heft 3. [A study, for the period 1725-40, of the regulations partially emancipating industry from gild control.]

SALVIOLI (G.). Per la storia della proprietà in Italia. Vierteljahrschr. f. Soc. u. Wirtschaftsgesch., 1905, Heft 1.

WOPFNER (H.). Freie und unfreie Leihen im späteren Mittelalter. Vierteljahrschr. f. Soc. u. Wirtschaftsgesch., 1905, Heft 1.

XII. DESCRIPTION OF INDUSTRIES AND RESOURCES.

ARON (M.). L'exploitation du pétrole en Roumanie. Paris: Dunod. 1905. 8vo. pp. 88. 2.50 fr.

BAHR (R.). Gewerbebericht, Kaufmannsgericht, Einigungsamt: Ein Beitrag zur Rechts- u. Socialgeschichte Deutschlands. Leipzig: Duncker & Humblot. 1905. 8vo. pp. 191. 4 m.

[In Schmoller's Forschungen.]

FRAHNE (C.). Die Textilindustrie Schlesiens. Ihre wirthschaftliche und technische Grundlagen, histor.-oekon. Gestaltung und jetzige Bedeutung. Tübingen: H. Laupp. 1905. 8vo. pp. 285. 5.60 m.

[A doctor's dissertation.]

HAGER (L.). Die Lederwarenindustrie in Offenbach a. M. und

Umgebung. Karlsruhe: G. Braun. 1905. 8vo. pp. 98. 3 m.

[In Volksw. Abhandl. der badischen Hochschulen.]

HASSEL (T.). Der internationale Steinkohlenhandel, insbesondere im Jahrzehnt 1891-1900. Essen: G. D. Baedeker. 1905. 8vo. 6 m.

KOCKERSCHIEDT (J. W.). Ueber die Preisbewegung chemischer Produkte unter Berücks. neuer Erfindungen und technischer Fortschritte. Jena: G. Fischer. 1905. 8vo. pp. 181. 2.50 m.

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THE
QUARTERLY JOURNAL
OF
ECONOMICS

FEBRUARY, 1906

THE TRUNK LINE RATE SYSTEM: A DISTANCE
TARIFF.

THE trunk line freight rate system effectively demonstrates certain principles in railway economics which are of importance at the present time in connection with the problem of Federal regulation. The danger of arbitrary administrative interference without a full understanding of the intricacies of rate making, and at the same time the essential soundness of American railway practice in seeking independently to solve these complex problems by equitable means, are amply illustrated. The fallacy of certain objections to governmental control is revealed with corresponding clearness. Three principles in particular deserve mention in this connection. These are: (1) that the element of distance should be a prime factor in the final adjustment

¹The author is indebted to the Carnegie Institution for a grant which has made it possible to collect the data for this article in the field, in connection with research on the Economic History of the United States.

of rates as between competing localities; (2) that co-operation and agreement between competing carriers are essential to any comprehensively fair system; and (3) that permanency and stability of rates are of equal importance with elasticity. That all three of these results have been voluntarily worked out in practice by the trunk lines is a tribute at once to the ability and fairness of their traffic officials. Standards are thus established toward which the carriers in the West and South should strive, as soon as their local traffic conditions will permit, in an endeavor to promote good relations with the shipping and consuming public.

That distance tariffs, modified in part to suit commercial conditions, are not only theoretically sound, but entirely practicable, this study aims to prove. The bogey of German rate schedules vanishes into thin air when it appears that the greatest railway companies in the United States have for years adopted the same principles in working out their tariffs. The long and short haul rule is here enforced, not alone as between various points on the *same* line, but also as between points equally distant from a common destination on *different* roads. Thirty years ago the trunk lines conceded the principle, for the recognition of which the shippers of the West and South are now so vociferously clamoring before Congress and the Federal courts.

This desirable end could never have been attained if the several competing companies had not been able to act in co-operation. The erroneous popular opinion that railway competition must be preserved in the public interest, had it been legally enforced in this territory a generation ago, would have prevented absolutely any comprehensive solution of the problem. Until Congress abandons this theory, and treats railways as essentially monopolistic, thereafter to be protected and maintained

as *beneficent* monopolies through adequate governmental supervision, the lesson of trunk line experience will not have been learned. And, finally, the interesting fact that for almost thirty years it has not been necessary to change either the main system or, in many instances, the actual rates charged thereunder, is an offset to the contention that success in railway operation is to be judged by the instability of rates, seeking to follow constantly the ups and downs of commercial conditions. Certain modifications, especially in export and import traffic, or wherever water rates have to be made or met, are, of course, inevitable. But it is absurd to reason from this that railway tariffs in the main need to be continually jostled about at the behest of the shipping public. Of course, if one railway changes its rates, all the rest must follow. That is the principal reason why many of our rate schedules have been as uncertain as the weather. But there is no reason why, if all parties in competition keep good faith and observe their tariffs, a schedule of class rates for domestic shipments should not remain practically constant.

Take the rates on raw cotton from Mississippi River points like Memphis to New England cities, for example. Was any staple product ever subject to greater fluctuations in price than raw cotton, varying as it has in the last few years, from five to fifteen cents a pound? Yet through it all, good years and bad, whether for the planter or the manufacturer, the freight rate has stood unchanged at 55 cents per hundred weight. In the same way, within the limits hereafter to be described, the trunk line rate system has endured for a generation. Founded upon sound and, consequently, defensible principles, it has promoted good feeling between railway and shipper. And, if the changes of classification since 1900 had not been made, one may reasonably doubt whether the demand for Federal legislation would have been any more insistent

throughout the Eastern Central States than it now is in New England.

The causes leading to the adoption of a systematic rate scheme by the trunk lines acting jointly¹ can be understood only in the light of the conditions existing about 1875. The Baltimore & Ohio Railroad had entered Chicago in 1874, after which time the most furious rate wars between

¹ The literature on the subject is scanty. Much of the material has necessarily been gathered in the field by conference with traffic officials and others. My hearty thanks are due primarily to Paul P. Rainer, Esq., chief of the Joint Rate Inspection Bureau at Chicago, for his willingness to impart such explanation of this complicated matter as the delicate responsibilities of his important post permit. The map published herewith, while in part prepared from the actual percentage tables, with his permission and that of several important trunk line officials concerned, has been checked and corrected by his official copyrighted map of January 1, 1899. While the scheme of graphic representation is entirely different, the facts represented are the same. I am also especially indebted to H. C. Barlow, Esq., formerly president of the Terre Haute & Evansville Railroad and now director of the Chicago Commercial Association, and to J. W. Midgley, Esq., for many years one of the Trunk Line Commissioners, for assistance in many ways.

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the four trunk lines had been in progress. The main dependence of all these lines was still upon the grain traffic, and all of this was moving in one direction toward the seaboard. As late as 1882, 73 per cent. of the trunk line tonnage east-bound consisted of such commodities.¹ Moreover,—and this is a point of especial importance,—the bulk of this grain originated in the territory east of the Mississippi and south of Chicago. Over four-fifths of the east-bound traffic came from the States of Illinois, Indiana, Ohio, Michigan, and Pennsylvania. The great north-west and trans-Mississippi territory was not yet opened up. Wisconsin and Iowa contributed only about 10 per cent. of the east-bound tonnage, while over two-thirds of the west-bound business did not pass beyond Illinois.² Nor was the traffic concentrated as yet in the larger cities. Mr. Fink makes it clear that most of the business was gathered up by the trunk lines and their connections from small towns along the way. The modern problem of the great city in competition with the small towns was as yet unknown. The trunk lines had few feeders. Only the main stems to Chicago had been built. Consequently these Central States were served by a host of little cross lines, built as local enterprises, many of them radiating from Chicago, Cincinnati, Toledo, or Cleveland at right angles with the trunk lines, and, for the main part, engaged in an endeavor to open up their territories to water communication with the East by way of the lakes and the Erie Canal. Rail rates, nominally at least, were still high, the rate first-class Chicago to New York, for example, being about double its present figure; and the conditions of railway operation were such that water competition was a matter for grave concern. Every change in the lake situation was at once reflected in the rail rates, violent

¹ Fink, *Adjustment of Railroad Transportation Rates*, etc., p. 16.

² *Ibid.* pp. 19 and 52.

dislocations at the opening and closing of navigation in the spring and fall being of especial importance.

Among these confusing elements in the problem of trunk line rate adjustment five distinct phases were prominent. In the first place the four trunk lines were a unit in opposition to the diversion of traffic to the Great Lakes and the Erie Canal. However much they might bicker with one another afterward,—apportionment of the rail business being a distinct feature of the problem,—their interests at the outset were identical respecting the necessity of holding the business on land. Water competition by way of the lakes or the Ohio River was a danger common to them all. The intensity of this pressure may be understood from the statement that the trunk lines were not even consulted in making the Chicago-New York rate on which the Western lines pro-rated. They had no voice in it, merely accepting the figure offered them by their connections into Chicago.¹ The second feature of the problem, namely the division of the all-rail traffic among the competing carriers is immaterial to the main question before us. Thirdly, it was essential to the trunk lines to restrict and control the activities of the subsidiary cross lines and feeders, most of which, as has been said, were independent. Many of these, aside from having a direct interest in their longest haul to a terminus on the lakes or the Ohio River, had been built by local capital, and were administered in the interests of the lake cities or Cincinnati and Louisville. There was no unity whatever in their policies, and the most ridiculous wastes of transportation resulted. Grain was literally meandering toward the East instead of moving by a direct route.² Joint through rates would be made by the most extraordi-

¹ Windom Committee Report, vol. II. p. 7.

² Waste of transportation as an economic problem, will be discussed in another paper.

nary chain of connecting links leading to the seaboard by very circuitous ways.¹

A fourth evil, akin to this, consisted of the difficulty of maintaining through rates, not as among the trunk lines who might be made parties to a pool, but by reason of cut-throat competition between their Western connections.² The agents of these Western lines would indiscriminately cut rates to or from points on their lines, and then expect their trunk line connections to accept a proportionate shrinkage of the joint through rate for their part of the haul. The weaker companies would, of course, be susceptible to such temptations in order to secure the business. No stable apportionment of this Western traffic among the Eastern lines would be possible until they could agree upon a fair rate for the trunk line haul, and rigidly adhere to it. And, finally, water competition, causing constant fluctuations in the lake and Ohio River rates, while directly potent only at waterway points, was continually putting the through rates from these points out of line with the local rates from non-competitive inland centres. Or, perhaps, the Ohio River and lake rates would be out of joint with one another. The Chicago basis, if applied to Paducah, would make a rate on tobacco that would send it via New Orleans.³ Products would go down the Mississippi after the lakes had been closed by ice. A considerable amount of corn was certainly moved to New York by that route.⁴ Some device for co-ordination of the through and local rates—or, as one might put it, for the distribution of the localized shock of water rate changes—was imperatively necessary.

¹ This persisted even in 1890. Consult 51st Congress, 1st Session, Senate Report No. 847, p. 616.

² Hepburn Committee, pp. 3006-3010.

³ Hepburn Committee Report, p. 318.

⁴ Windom Committee Report, vol. ii. p. 287.

An ingenious rate clerk named McGraham, in the offices of the Pennsylvania Railroad, proposed in 1876 a comprehensive scheme for meeting these difficulties. The Chicago-New York rate was to constitute a basis, upon which all other rates were to be made in percentages, according to their relative distance from New York.¹ Thus, assuming Chicago to be 900 odd miles from New York, the rate from a point 600 miles inland would be about 66 $\frac{2}{3}$ per cent. of the Chicago rate, whatever that might be. Whenever the lake rate at Chicago changed, every other rate throughout trunk line territory would vary in due proportion. Relativity of charges would thus be preserved. Moreover, the shortest route, "worked or workable," was to be used in calculating the rates, the basic distance being about 920 miles by the Lake Shore from Chicago to Dunkirk, Ohio, and thence by the Erie to New York. This would give compelling effect to distance as a factor, and would tend to penalize the roundabout carriage of goods. More than this, however, it would render the inland territory directly tributary to New York. From a point, for example, 50 or 100 miles south of Chicago, Toledo, or Cleveland, the local rate into those towns plus the through rate east to New York would always exceed the rate by a direct route east. For the hypotenuse of a triangle is clearly always shorter than the sum of the other sides. All shipping points equidistant from New York would enjoy equal rates, those rates at any time being determined by the state of water competition. This was a manifest advantage to the small inland centres, while the rate on the lake front was not affected. The trunk lines lost something, perhaps, through lower rates at intermediate points; but the gain through diversion of traffic from the lake to the rail lines more than compensated. For conditions were such in the summer of 1875 that

¹ This was adopted officially by the trunk lines April 13, 1876.

the lake boats were prepared to carry grain for almost nothing. The railroads were helpless in such cases.¹ The only real sufferers were the short, independent cross lines and the lake and river cities. Of these, the former were reduced to a status of mere feeders or branches of the trunk lines. They were compelled to accede to the plan, however, by threatened refusal of the trunk lines to turn over business to them west-bound, unless they reciprocated with their grain shipments east-bound.² Many of these lines became bankrupt later, and were absorbed by the larger companies.³ And, as for the cities unfavorably affected, the scheme based upon distance was so obviously fair that their protests were of no avail.⁴

The great contest between the trunk lines over the granting of differentials to Philadelphia and Baltimore, as against New York and Boston, played a not unimportant part in the diplomacy leading to the acceptance of the McGraham system. The New York Central, the Lake Shore, and the Boston & Albany roads, of course, eagerly accepted it, because it promised aid in meeting the lake competition to which they were peculiarly exposed. The Pennsylvania and the Erie, lying considerably further from Lake Erie, would also be benefited, operating as they did in a territory naturally tributary to them, but exposed to drainage to the lakes by lateral lines. But the Baltimore & Ohio, ever since its entry into Chicago in 1874, had been a thorn in the flesh of the others. The

¹ Hepburn Committee Report, p. 3112.

² Record Proceedings Railroad Commission of Illinois in Revision of Maximum Freight Rates, 1905, pp. 32 and 88.

³ 55th Congress, 1st Session, Senate Document No. 39, p. 33. The Hepburn Committee (p. 3111) describes the local jealousies which prevailed.

⁴ Chicago has never become reconciled to it, however, alleging that it injures her commercially. Compare Windom Committee, 1874, vol. i. p. 24; 51st Congress, 1st Session, Senate Report No. 847, 1890, pp. 611 *et seq.*; Elkins Committee, 1905, pp. 1433, 2538 *et seq.*; and Record Proceedings Illinois Railroad Commission on Revision of Maximum Rates, 1905. Cf. p. 209, *infra*.

territory along its line was so far from the lakes that it had little to fear from water competition at intermediate points between Chicago and the seaboard. Would it accept a plan primarily intended to meet a danger which, while injuring its powerful rivals, was of less consequence to itself? Fortunately for the scheme, it was based upon the solid principle that distance was of preponderating influence in the adjustment of rates. The entire contention of the Baltimore & Ohio and the Pennsylvania for a differential rate to Baltimore and Philadelphia below New York rested upon this same principle. The distance from Chicago to the southern ports was less. Consequently, they insisted, they were entitled to offer a lower rate. The McGraham scale and the port differentials were thus logically connected. They stood or fell together. The McGraham plan materially aided the Baltimore & Ohio in making good its demands.¹ It was acceptable, therefore, by reason of this collateral advantage.

Another factor in the situation appealed to the Pennsylvania and the Baltimore & Ohio. Their lines to tide water were about 75 and 100 miles shorter, respectively, than the shortest line to New York.² In the division of the joint through rate between a chain of connecting railway lines this was of great advantage. It always aids the shorter line, if pro-rating is based upon mileage. A feeder 100 miles long pro-rating with a trunk line 1,000 miles in length would be entitled to only one-eleventh of the total rate. Were the trunk line only 800 miles long, the neutral road might claim one-ninth. This seemingly slight difference might mean several hundred thousand dollars more earnings to the neutral road, or feeder, if it

¹ Hepburn Committee, p. 3104.

² Distances are given in the Thurman-Waahburne-Cooley Advisory Commission on Differentials, etc., of 1882.

turned over its business to the short line.¹ Any emphasis upon distance as a general principle strengthened the Baltimore & Ohio in securing patronage from other roads by this means. The other trunk lines, through acceptance of the McGraham scale, conceded the distance principle, and with it, coincidentally, the pro-rating practice.

After three years' experience the McGraham scale was readjusted to conform more closely to the cost-of-service principle. The plan, as thus revised, is the one still in force.² It recognizes that railway charges should be proportioned to the length of haul, so far as actual costs of haulage are concerned; but it first eliminates those constant elements in cost which do not vary with distance. The original McGraham scale made no such distinctions. The expenses at terminals, such as loading and unloading, are, of course, entirely independent of the distance covered by the shipment. These, being determined roughly by experimentation, are first deducted from an assumed Chicago rate. From the remainder the rate per mile by the shortest route to New York (920 miles) is then calculated by simple division. This rate per mile is then applied to the distance to any intermediate point, and the terminal charge is again added. Thus a rate is found which is reduced to a percentage of the original Chicago base rate.

¹ Hepburn Committee, pp. 3188, 3195.

² The revised table of percentages is reprinted in full in Hepburn Committee Report, p. 3107 *et seq.*

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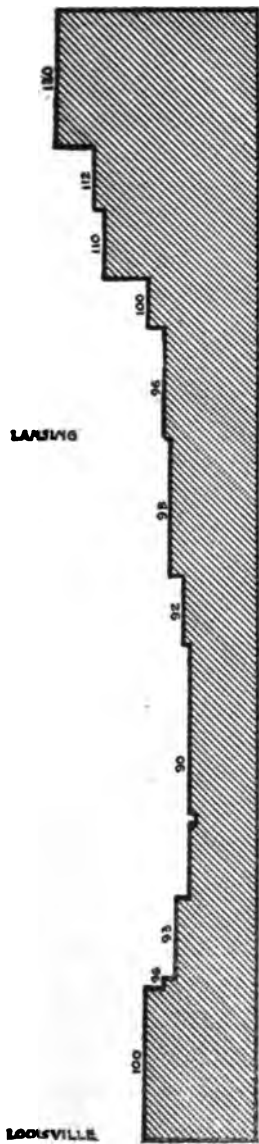
The revised system provides in theory for an absolutely constant rate per ton mile. It is a rigid mileage tariff in every respect. The original McGraham scale had been so in theory, but not in practice. As amended in conformity with a sound economic principle, it had, moreover, one important practical advantage over the original scale. It yielded more revenue at all the intermediate points.¹ Local rates would be higher as thus calculated than they were originally. It would be unjust to ascribe undue importance to this motive on the part of the roads in the adoption of the new system. That the plan yielded additional revenue, while obviously more just in theory, was naturally no objection to its acceptance.

The fruits of all this process of adjustment are depicted upon the accompanying diagram. Viewing it in a large way, and reserving details for later consideration, we may compare it to a topographical contour map. The several rate zones are thus analogous to a series of levels or steps rising from east to west. Our cross section of these along a line from Pittsburg to Burlington, Iowa, makes this relation plain. Another cross section at right angles to the first from Louisville, Kentucky, to Lansing, Michigan and beyond, shows how these levels are arranged in a plane from north to south. These steps form a sort of irregular amphitheatre opening toward the east, with its main axis lying in a direction slightly south of west toward St. Louis. Or, more correctly, these rate zones, pursuing our analogy to a topographical contour map, indicate a broad valley opening toward the east. Along the bottom of this freight-rate valley lie the great direct trunk lines converging from Chicago and St. Louis. Throughout the State of Illinois

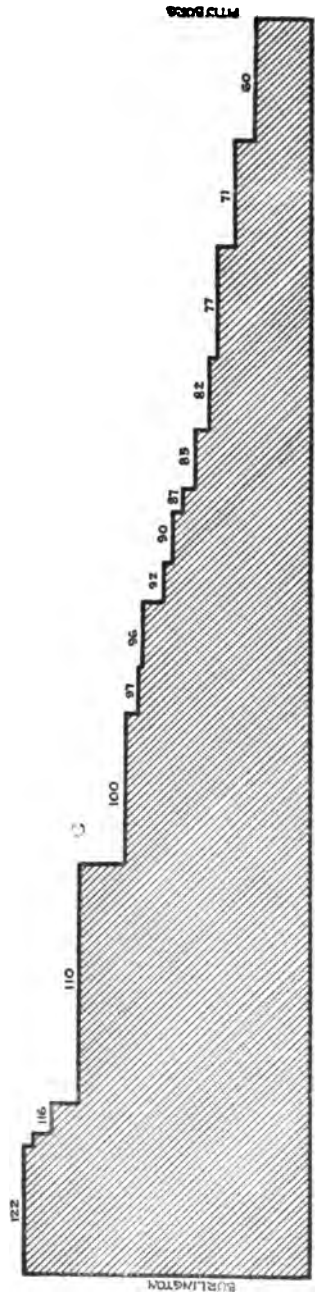
¹ Hepburn Committee, p. 3104. A hypothetical instance will serve as illustration. Suppose a point with an 80 per cent. rate on the old schedule. When Chicago paid 25 cents, the rate to this point would be 20 cents. Under the new scheme the intermediate rate would be 80 per cent. of 19 cents, or 15.2 cents, plus 6 cents terminal charge, making a total of 21.2 cents. This is 84.8 per cent. of the Chicago rate instead of 80 per cent. as before. Compare table, p. 203, *infra*.

the valley opens up onto a plateau, somewhat grooved in the middle at Peoria, where the direct lines from the west cross a neutral field tributary neither to Chicago nor St. Louis exclusively. This general description harmonizes with the apt figure used by that master mind in railway economics, Albert Fink. Speaking of this situation, he says, "The trunk lines are nothing but great arteries of commerce, like rivers, only with this difference: the rivers never run across each other, the territory from which they draw their supplies is distinct and well defined." Since his time, by reason of co-operative action for a generation, the confusing maze of railway lines has now been reduced to a single comprehensive system. Cross-currents of trade hither and thither have been united or articulated in such a way as, speaking in terms of freight charges, to cause the great internal commerce of the country to flow downhill toward the seaboard in an orderly and reasonable way. The inequalities incident to commercial competition have been modified, or, to revert to our original figure, eroded; so that one may literally speak of the products of the country as flowing, like rivers, in more or less natural channels over the railway lines from the great interior basin towards the Atlantic seaboard.

The mathematical precision of the method of computation heretofore described, while theoretically applicable to a series of parallel roads in a flat country, free from either water competition, the competition of cross railway lines, or the competition of towns and cities of unequal size and importance, obviously requires modification to suit the actual traffic conditions in this densely populated trunk line territory. The process of adjustment has been gradual and necessarily tentative. Every influence brought to bear has been subversive of systematic arrangement, tending, that is to say, to amend the scheme out of all semblance to mathematical order. After reading



CROSS-SECTION THROUGH LOUISVILLE AND LANSING



CROSS-SECTION FROM BURLINGTON TO PITTSBURG

volumes of the Proceedings of the Joint Rate Committee, filled with petitions of railways, towns, and individuals for exception to the general rules, one is surprised to find that, after all, the scheme is so well ordered as it is. It has been held true only by rigid adherence to the rule that by the shortest "workable and worked route" no intermediate place shall be charged more than is charged to any point beyond. In other words, the long and short haul principle is consistently observed. Space does not permit a discussion of all of the factors which have tended to modify the original simple scheme. Three alone may be considered as illustrative of the rest. These are: (1) the effect of railway competition at the important junction points; (2) the influence of the independent cross lines of railway; and (3) commercial competition between producing or distributing centres.

The effect of railway competition at junction points is revealed at once, upon inspection of the map, by the general law that the boundary line of zones lies immediately west of the large cities. Notice the location of Cleveland, Warren, Pennsylvania; Newark, Ohio; Dayton, Fort Wayne, Detroit, Port Huron, Cincinnati, Indianapolis, Louisville, Lansing, Logansport, Terre Haute, Peoria, and Decatur. Columbus, Toledo, and Evansville, Indiana, are about the only exceptions. In nearly every case the theoretical zone boundary has been shifted in such a way that the rate rises just west of the important competitive point. The reason is obvious. Rates being held down at these points, and no greater rate being possible at any other point further east, conditions must be equalized *upwards*, immediately the depressing influence of competition is removed. Each zone level is of necessity an average of a theoretic constantly rising scale from east to west. Places immediately west of an important junction point are raised somewhat above their theoretical grade

as a compensation for those places on the westerly side of each zone whose rate is held down below their theoretical level by the exigency of competition at the next large town. Or, to be specific, Indianapolis may hold down the rate to 93 per cent. of the Chicago rate farther west than otherwise would be the case. In fact, by reason of its paramount importance as a railway centre, it has held down the rate so far west that for purposes of equalization the rate west of it immediately jumps to 100 per cent. For, as will be observed, on inspection of the map, the 96-97 per cent. zone is interrupted at this point; the 92-95 per cent. zone being extended unduly far west and the 100 per cent. zone being extended inordinately far east, until the two meet just west of Indianapolis. Detailed study of the schedules and maps will reveal many similar instances.

The converse of the proposition that important junction points lie near the western zone boundaries is found in the fact that, where competition is absent, the zones sweep much farther east than mathematically would be prescribed. In other words, wherever competition is less keen, the percentage rates remain high. Were competition entirely uniform in its geographical distribution, the several zones would be parallel, sweeping evenly clear across the map. Illustration of this circumstance will be found in the extension of the 87 per cent. zone far to the east, along the Ohio River, in fact nearly to Parkersburg, West Virginia. Or, again, in the 110 per cent. territory which extends nearly to Louisville. This latter rate has been recently amended, as will be shown later; but for many years continued, as here represented, abnormally far to the east. In both these instances the railway facilities along the river are monopolized by the Baltimore & Ohio as a trunk line. The only competition is due to the Cincinnati, Hamilton & Dayton and Norfolk & Western,

both of which work their traffic from New York north. The population and traffic density being at the same time low, a relatively high level of rates has resulted. Sometimes, also, it may happen that in these outlying regions the shortest line "workable and worked" to the seaboard may not be due east, but may proceed north until a junction with a trunk line can be effected.¹

The influence of independent transverse lines of railway has been of great importance in shifting the zone boundaries from their theoretical location to conform to practical requirements. Study of the map permits a second important generalization. Not only does the boundary of the zones usually lie just west of large cities, the course of the boundary at the same time frequently follows the location of important independent transverse railways. The zone boundary, in other words, lies just west of the cross railway line. For example, the western boundary of the 100 per cent. Chicago zone, after leaving a point on the Illinois Central, is defined from north to south by the course of the Chicago & Eastern Illinois Railroad, and below Terre Haute by the line of the Terre Haute & Evansville. Similarly, practical exigencies determined the odd shape of the 110 per cent. zone, formed like a great distorted boot leg. The western boundary of this 110 per cent. zone from Peoria south closely follows the Peoria, Decatur & Evansville road nearly to the Ohio River. Similarly conditioned by railway lines are the boundaries north and south of Indianapolis, and especially north and south of Fort Wayne, Indiana. In other cases where the transverse lines do not cross nearly at right angles with the trunk line, the zone boundary will follow one railway for some distance, and then skip across to another railway

¹Thus from Ironton, in the 87 per cent. zone south of Columbus, Ohio, the distance to Columbus is 127 miles, added to 638 miles from Columbus to New York makes a total of 765 miles. Multiplying this by 00.0206 makes it 87 per cent. of the Chicago rate.

whose general direction is more nearly perpendicular to the trunk lines. Thus, from Toledo to Lima, Ohio, the western boundary of the 76-80 per cent. zone follows the Cincinnati, Hamilton & Dayton, cutting the Baltimore & Ohio and Pennsylvania trunk lines at right angles; and then it jumps across to the east until it strikes the sweep of the Toledo & Ohio Central, which carries it down almost to Columbus. Similarly, the western boundary of the 66½ per cent. zone follows the line of the Pittsburg & Western north from Warren, in order that that line may participate in New York business by working its line north via Painesville on the Lake Shore.

Why is it apparently necessary that these zone boundaries should follow along just west of the cross railway lines? The reason may be made clear by a concrete instance. Originally and until about 1891, Louisville, Kentucky, instead of having the 100 per cent. Chicago rate, as at present, enjoyed, on the base of its distance from New York, about 96 or 97 per cent. of the Chicago rate. In other words, the 96-97 per cent. zone shown on our map as interrupted at Indianapolis, partly for reasons already mentioned, originally swept across the map all the way from Grand Rapids to the Ohio River. This territory from Chicago south is served by the Monon Railway (Chicago, Indianapolis & Louisville), whose line, not fully indicated on the map, thus lay partly in 100 per cent., partly in 96 per cent., and partly in 97 per cent. territory. An important part of the traffic of the Monon, as well as of the other independent north and south lines, consists of business coming in from the East at the north and worked south, or coming in from the East at the south and worked north. Or, in other words, this line subsisted in part upon indirectly routed tonnage from New York, let us say, destined for Louisville, but reaching it by way of Chicago junction points. Freight thus hauled around two sides of

a triangle, instead of by a direct line, constitutes one of the important sources of waste of transportation energy to be described in another paper. The Monon by such tactics is able to participate in, and to profit by, a much larger volume through business. That is to say, its proportion of the entire haul is much greater than it would be if the business moved by the shortest line. Moreover, when indirectly routed, the Monon, often securing for its trunk line connections tonnage for the East which would naturally go to other competitive trunk lines, is able to exact a higher pro-rating than even its extended lateral haul would justify on a strictly distance basis. Such circumstances always greatly enhance the profitableness of lateral hauls to minor connecting roads. It is obvious that much of this transverse haulage would be impossible wherever the lateral railway lines traverse different zones of rates. It might haul traffic from its 100 per cent. end, to connect at its 96 per cent. end with a trunk line for the East, but not in the opposite direction. The Monon, always in a position to disturb the rate situation, through connection with all the competing trunk lines, insisted upon equality of rates all along its line. To do this, the 100 per cent. zone had to be extended east to Indianapolis. Thereafter the Monon could profitably "work its line in both directions." This illustration will serve to show why ordinarily the zone boundaries conform as closely as possible to the course of the lateral roads. The confusion which would be engendered, were the Peoria, Decatur & Evansville to be partly in the 110 per cent. and partly in higher percentage territory, while still insisting upon its right to work its line both ways, can readily be imagined. To avoid such difficulties, the present modification of strictly distance percentages had to be adopted.

The third dominant influence, above mentioned, in modifying the mathematical precision of percentages based

alone upon the distance from New York, has been the commercial competition of traders and cities one with another. The aim of all rate adjustment should be, and in fact, so far as possible in American railway practice, is to equalize conditions, so that the widest possible market shall result. Producers or traders in each city demand access on even terms to all territory naturally tributary to them by reason of their geographical location. Each particular railroad sees to it that its own patrons and cities are "held" in all parts of these markets, as against the efforts of competing railways to promote the welfare of their own constituencies. Consequently, the Proceedings of the Joint Rate Committee are filled with discussions as to the advisability of amending general rules here and there to suit local conditions. Minor changes are continually being effected. Grand Rapids, Michigan, once in 100 per cent. territory, asked for a 90 per cent. rate, and in 1891 secured a reduction to 96 per cent.¹ Louisville, once in 97 per cent. territory, is now a 100 per cent. point. Shifts in both directions have frequently occurred, as the following table of percentages shows:²—

<i>Basis.</i>	<i>Detroit.</i>	<i>Toledo.</i>	<i>Sandusky.</i>	<i>Cleveland.</i>
April 13, 1876	85	78	71	65
June 23, 1879 ³	81.5	81.5	78	73.5
April 14, 1880	75.5 ⁴	75.5	75.5	70
Present (1900)	78	78	78	71

A number of changes were made in 1887 in order to conform to the long and short haul clause. Flint, Michigan, for example, was reduced from 95 to 92 per cent.; Ash-tabula, Ohio, from 71 to 67; while Springfield, Ohio, was

¹ Cf. Industrial Commission, vol. iv. p. 556.

² Record, Detroit Board of Trade case.

³ Consult p. 195, *supra*.

⁴ Computed apparently by regular rules, but on the basis of only 4 cents terminal charges instead of the usual 6.

raised from 82 to 83 per cent.¹ Detroit has been most active in prosecuting its claims for a reduced percentage.² But the Interstate Commerce Commission in 1888 upheld the present status. A recent minor change is indicative of the forces which must be dealt with. Evansville, Indiana, on the Ohio River, according to our map, is a 110 per cent. point. Vincennes, Indiana, lies just north of it in the 108 per cent. triangular zone. Since this plate was made, Evansville has been reduced to 105 and Vincennes to 103 per cent., respectively. This is substantially, I am told, on a mileage basis. The reason for the amendment is that certain important industries are located at these points. Either to favor them specially or to remove a pre-existing disability in competition with other towns, this change was insisted upon by the railways interested in their prosperity. By tentative processes of adjustment like this the present general relations have been established. They have been kept constant only by the steady resistance of the majority of carriers to action which is in the interest of a few. Judged by results, it would appear that the broad view has, in the main, prevailed.

The actual situation resulting from the above-named causes, it should be observed, is not quite as simple as our map makes it appear. Most of the zones are in fact subdivided into minor gradations. Thus the closely dotted zone designated "86-90 incl." is constituted of an 87 per cent. area up as far as the railway from Dayton to Indianapolis; while the rest of it is broken up into little 88, 89, and 90 per cent. areas, respectively. The same thing occurs elsewhere. Our map generalizes the results, in an effort to bring out the zone relationships as fully as is technically possible in a single diagram. Certain of

¹ Joint Rate Circular, No. 815.

² Demanding a 70 per cent. rate on a strict mileage basis, and also because the pro-rating basis with Western lines is at that figure.

the zones, however, such as the 60, 66 $\frac{1}{2}$, 100, and 110 per cent. territories, are bounded exactly as here represented.

As for direction, the original scale was intended only for east-bound traffic. West-bound rates were lower and more irregular. But the system worked so well that it was soon extended to cover the west-bound business. Owing to difficulties of routing, in order to transport by the shortest line into Chicago, these west-bound percentages were often quite different from those in the opposite direction.¹ Detroit, for instance, for some time prior to 1886 enjoyed a 70 per cent. rate west-bound, while its percentage in the opposite direction was 78.² But, after the passage of the Act to Regulate Commerce in 1887, efforts were made to harmonize the differences.³ At the present time the rates east and west are in most cases the same.

At this point it is essential to understand the limitations within which this percentage system is confined. It does not necessarily determine the exact rate to be applied in practice from every little station in trunk line territory. For, in the first place, it concerns only the so-called common points; that is to say, points where competition of two or more carriers is effective. Purely local stations are charged an "arbitrary" into the nearest common point. But, inasmuch as throughout this much be-railroaded country most shippers are less than twenty miles from the next line,⁴ and since, moreover, the arbitrary can never raise the local rate above the rate to the next common point

¹ Trunk Line Association Circular No. 523, issued July 26, 1883, gives tables of these percentages in each direction. Present west-bound percentages are given in *Ibid.*, No. 751, issued April 3, 1899.

² Typewritten record, Detroit Board of Trade case, 1887-88, Interstate Commerce Commission Office, pp. 244-251.

³ Under a committee headed by the late J. T. R. McKay, of Cleveland. The Official Classification and the 75 cent New York-Chicago rate first-class were then adopted for good.

⁴ I am told that rivers intervening to cut off cartage by wagon to competing lines have sometimes effectively influenced the charges.

beyond,¹ the scale is practically effective everywhere. A more important consideration is the fact that this scale, even for common points, does not positively fix the rate. It merely provides a minimum below which rates shall not be reduced, except by authority of the roads acting jointly. It is a minimum, not a maximum, schedule in every sense. Its provisions are never promulgated in the form of tariffs as such. They are rarely known to shippers, but serve only as a guide to traffic officials. The Interstate Commerce Commission, in sanctioning the system, has expressly recognized this fact.² Moreover, these percentage rates apply to "classified" tonnage, and not to the great bulk of commodity or special rates which are independently made. This exception is more important than either of the others, inasmuch as probably three-fourths at least, of the trunk line tonnage measured by weight, is moved under such commodity rates. Financially, of course, the relative proportion of commodity freight is vastly less than this figure. For the classified tonnage is made up exclusively of high-grade goods, transported at most remunerative rates, while the commodity traffic, while bulky, often yields a very low revenue per ton mile.

Other exceptions to the applicability of this percentage system deserve mention, although they are of relative unimportance. Principal among these is the confusion engendered in Illinois territory through the entry of the Western lines into Chicago. Throughout their constituencies, by reason of the sparse population, freedom from competition, inequality of east and west bound tonnage, and low-grade freight, Western railroad rates per ton mile

¹ The long and short haul principle has always been given great weight here. All exceptions to it were removed in good faith by the carriers when the Act of 1887 was passed. Cf. Windom Committee, vol. i. p. 26; vol. iii. pp. 42, 134, and 283.

² G. C. Pratt Lumber Co. v. Chicago, Ind. & Louisville Ry. Co., decided January 27, 1904.

are very much higher than on the trunk lines. Moreover, they are naturally desirous of as long a haul as possible, namely into Chicago. To turn over their local Illinois traffic to the trunk line feeders exposes them financially to the same losses as those above mentioned in the case of lateral independent lines further east. But these Western lines, being stronger, have insisted upon recognition of their claims to a proportion of the through rate which would at least "pay for their axle grease."¹ The result is that throughout Illinois, especially in the north and toward the Mississippi, the distance principle is considerably distorted, as our map clearly shows.—The percentage system practically excludes freight "From Beyond," the rates on that being determined by other rules.

East of the Central Traffic Association territory shown on our map the same percentage system is extended to points in New York and Pennsylvania.² Suppose, for example, the rate were desired from Columbus, Ohio, to Albany, New York, or any other point between Buffalo and New York City. The rate from Columbus to New York City would first be determined as a percentage of the Chicago-New York rate, under the system already described. Then from Columbus to Albany the rate would be prescribed as a new percentage of this percentage. The initial Western points, however, are not determined individually, but are comprehended in large groups. Thus the rate from all points in the 72-78 per cent. territory, shown on our map, to Albany, New York, is 96 per cent. of what the rate would be from those points to New York City. Syracuse has 76 and Utica 87 per cent., respectively, of the rate from any point in this 72-78 per cent. territory. From points beyond Chicago taking, that is to say,³ more

¹ United States Industrial Commission, vol. iv. p. 562.

² Cf. Joint Committee Information No. 298 of January 13, 1900, giving all these rules in detail.

than 100 per cent. of the New York-Chicago rate, the percentages of the rate to New York City applying to Albany, Syracuse, and Utica are correspondingly modified to 96, 84, and 91, respectively. Other complications, such as the addition of arbitraries to Boston and New England points or the subtraction of differentials to Baltimore and Philadelphia, follow. But, in the main, conforming always to the long and short haul principle,¹ rates to all local stations are prescribed within narrow limits by means of a small number of these fixed points. The system is the same, although details may vary. Everything interlocks and is harmoniously related on the distance basis.

Rates from one point to another within the Central Traffic Association territory shown on our map now alone remain for consideration. These cannot, of course, be adjusted on a percentage basis, inasmuch as such traffic may not be east or west bound at all, but may consist of shipments in any direction. There is no logical reason why they should interlock with east or west bound through rates when the traffic is, perhaps, moving locally north and south. Nevertheless, the long and short haul principle is observed with the same fidelity. A rigid distance tariff for short hauls, the limits of which are prescribed by the rates for long hauls under the McGraham schedule, prevails.² For distances up to 75 miles this conforms closely to the rates originally prescribed by the Ohio legislature. For greater distances it is much lower than the Ohio tariff.³ Thus the Ohio rate for 350 miles is 87.5 cents, while the C. F. A. (Central Freight Association) scale is only 42 cents. The Ohio scale for 200 miles is 50 cents, the C. F. A. rate for the same distance is only

¹ Cf. Windom Committee, vol. II, pp. 42 and 134.

² Known as the C. F. A. scale. Full text is printed in Illinois Railroad Commission Proceedings in Maximum Freight Rate Case, Record, etc., 1905, p. 43. See also p. 97.

³ Detailed comparison is made in *Ibid.*, p. 45. See also p. 172.

33 cents. Thus it appears that this C. F. A. tariff, applicable to interstate business and beyond control of any State legislature, has, in reality, been voluntarily adopted by the interested railroads. The tariff is only a minimum scale, below which the roads agree not to reduce rates, and above which the actual rates often rise.¹ Nevertheless, the fact remains that these rates, according to distance, are so much lower than the Illinois Railroad Commission's tariff that Chicago and other distributing centres throughout the State of Illinois claim that it works great hardship to them. The situation in Illinois is geographically peculiar. Its great commercial centre is in the extreme north-eastern corner, while, at the same time, the greatest extension of the State is north and south. These circumstances, coupled with an interstate (C. F. A.) tariff lower than the Illinois official tariff under which Chicago merchants must ship out their goods, enable Detroit, Indianapolis, and Cincinnati to undersell Chicago in its own State. Chicago can be equalized there only by special or secret rates.² Other local centres, like Quincy, Illinois, joined with Chicago in this complaint to the Illinois Railroad Commission that their rates were too high.³ Think of it! Shippers complaining that a government rate was too high, and requesting that the railway tariff (C. F. A. schedule) be adopted in its place! Is that not evidence that reasonable treatment of its shippers by railway companies is appreciated by the public? Without undue extension further details of this interesting controversy cannot be given. It will suffice to state that in December, 1905, the Illinois Railroad Commission ordered a reduction of its official schedule by 20 per cent., in an attempt to

¹ Illinois Railroad Commission Proceedings in Maximum Freight Rate Case, Record, etc., 1905, p. 152.

² Exhibit A 15, *Ibid.*, shows this by means of a map. See also Elkins Committee, vol. iii, p. 2271.

³ The double disability of these smaller places is stated in *Ibid.*, p. 7.

reduce its rates to conform more nearly to the C. F. A. railway tariff.

The evils incident upon two conflicting governmental authorities, State and Federal, each attempting to regulate rates independently, are clearly indicated in the preceding paragraph. The Interstate Commerce Commission has been brought flatly up against them in one of its recent Texas cases. Local and interstate rates must inevitably be adjusted with reference to one another, so complex are the conditions of commercial competition. So long as the plain people remain unsatisfied that any real Federal regulative power exists, is it not possible that the number of arbitrary State tariffs, like those of Illinois and, more recently, of Missouri will tend to increase? If State legislative attention could be diverted from similar activities, and such control as circumstances seem to warrant were to proceed from an efficient, centralized Federal source, the business of railway transportation might be more easily conducted than under present chaotic conditions. Regulation at best is a most difficult and delicate matter. It should never be attempted lightly. The main activities of any governmental commission should be directed towards settlements out of court, with as little exercise of mandatory power as possible. The chances seem to me to be more than even that a broad-gauge Federal commission would accomplish its ends in this manner, and thus tend to discourage State legislative interference in future.

WILLIAM Z. RIPLEY.

PARADOXES OF COMPETITION.

ECONOMIC terms seem to pass in their historical development through a series of stages which, without pretension to rigidity, may be described as follows: first, no definition is given, but it is assumed that every one has a sufficiently clear idea of the subject to make a formal definition unnecessary; second, a definition is attempted and a number of exceptional forms are noted; third, with the further increase of data, the relative importance of the various forms changes, confusion in discussion is introduced, logomachy takes the place of constructive investigation; fourth, a complete classification of the forms embraced under the original term is made, and problems are investigated with reference to these classes. The bewildering vagueness of economic theory is largely due to the fact that the terms used are in all of these stages of development.

Perfect competition is the fundamental hypothesis of economics in the sense that perfect competition is postulated in nearly every argument as to economic equilibrium. How far has the analysis of this term proceeded towards definiteness and precision? It would not be difficult to show that the assumption of sufficient clearness for practical and theoretical purposes is all too common in the contemporary treatment of the ultimate hypothesis of the science. In what respect is the idea of competition changed when the modifiers "perfect," "unlimited," "indefinite," "free," "pure," are added? If by these additions there is a change of meaning in the term, then, in cases in which the state of industry admits only of competition, what is the nature of the limitation of the

applicability of propositions deduced under the hypothesis of perfect competition? The almost invariable answer to this last question is that the imperfection of competition is simply a form of friction, producing, for the most part, a negligible variation from the standards that prevail in a régime of perfect competition. It is hoped that this paper may be a cause for a more careful scrutiny of this complacent answer.

The objects of the paper are threefold: (a) To present a series of paradoxes having their origin in the shifting meaning of the term "competition." (b) To mark the vicious fallacy—perhaps the most subtle and damaging of the many that pervade contemporary economics—of projecting into an unexplored territory the method of reasoning relative to a definite state of industry and a given series of implicit hypotheses. This point is enforced by a consideration of the doctrine that, as wages, the laborer gets what he produces. It is suggested that in the present state of economic knowledge, with the present method of economic reasoning, all that can be said of actual wages is that the laborer at least produces what he gets. (c) To indicate the need of a more precise definition of terms, a more careful formulation of the premises of our reasoning, and the imperative necessity of a statistical knowledge of the conditions of production and of the ownership of property.

I.

Some of the associations of the term "competition" should first be considered. It is quite true that "the strict meaning of competition" is "the racing of one person against another, with special reference to bidding for the sale or purchase of anything";¹ but that is not its full meaning when the proposition is deduced that under a régime of

¹ Marshall, *Principles*, p. 5, 4th edition.

competition the laborer gets what he produces. When competition is made the fundamental hypothesis in reasoning with regard to economic equilibrium, it takes on a more complex connotation, no matter whether the method of investigation employed is the common form of *ceteris paribus* of the older economists, the static state or statical method of the more recent deductive economists, or the system of simultaneous equations of the mathematical economists. In all these cases, competition is a blanket-term covering more or less completely at least the following implicit hypotheses:—

I. Every economic factor seeks a maximum net income. This is the essential meaning of the term.¹ It is made the basis of the definition of the science given by Professor Edgeworth: "Economics investigates the arrangements between agents each tending to his own maximum utility."² This aspect of competition is always explicitly emphasized in those systems of economics using analytical symbols, since it at once suggests that, as Malthus foresaw, "many of the questions, both in morals and politics, seem to be of the nature of the problems *de maximis et minimis* in Fluxions."³ It is the prime hypothesis used in the system of Cournot: "Nous n'invoquerons qu'un seul axiome, ou, si l'on veut, nous n'employerons qu'une hypothèse savoir que chacun cherche à tirer de sa chose ou de son travail la plus grand valeur possible."⁴ It may be called the maximum hypothesis of competition.

¹ "It is to Queenay in his *Dialogues sur les travaux des artisans* that we owe the first, and very categorical enunciation of the formula which has been so famous under the name of the edonistic (?) principle, and constitutes, in fact, the basis of economics: 'To obtain the greatest possible increase of enjoyment, with the greatest decrease of expense is the perfection of economics.' It is no exaggeration to say that he who enunciated this principle has indeed a right to the title of Founder of Economic Science." Gide's review of Higgs's *Physiocrats*, *Economic Journal*, June, 1897, p. 248.

² *Mathematical Psychics*, p. 6.

³ *Observations on the Effects of the Corn Laws*, 1814, p. 30.

⁴ *Recherches*, p. 46.

II. There is but one price for commodities of the same quality in the same market. This is Jevons's law of indifference, constantly used as a premise in his theory of economic equilibrium. It is also used by Cournot, notwithstanding the above statement that he would invoke but a single axiom: "Il ne peut pas y avoir dans une ordre de chose stable, et sur une grande échelle, deux prix différents pour une même quantité débitée."¹ As an illustration of the identification of this hypothesis with competition, a passage from Jevons's *Principles of Economics* may be cited: "This law of indifference, in fact, is but another name for the principle of competition which underlies the whole mechanism of society" (p. 60).

III. The influence of the product of any one producer upon the price per unit of the total product is negligible.

Compare, for an illustration, Professor Pareto's *Cours d'économie politique*, vol. i. p. 20: "L'échangeur subit les prix du marché sans essayer de les modifier de propos délibéré. Ces prix sont modifiés effectivement par son offre et sa demande, mais c'est à son insu. C'est ce qui caractérise l'état que nous appelons de libre concurrence. . . . En langage mathématique nous dirons que pour établir les conditions du maximum, on différencie en supposant les prix constants."

IV. The output of any one producer is negligible as compared with the total output. Professor Marshall has discussed this assumption in Note XIV. of the Appendix to his *Principles*, particularly p. 801 of the 4th edition.

V. Each producer orders the amount of his output without regard to the effect of his act upon the conduct of his competitors. Where III. and IV. coexist, V. is a simple corollary, otherwise it is an independent and inadmissible hypothesis. This fact should be carefully observed, as much of the subsequent reasoning is based upon it. In most systems of economics a theory of distribu-

¹ *Recherches*, p. 73.

tion is developed by reasoning consciously from hypotheses I. and V. It is not, however, by any means always perceived that the truth of the theory is further limited by the implicit assumption of hypotheses II., III., and IV. This loose method of procedure entails no necessary harm so long as the investigation is confined to a simplified hypothetical state, but great harm is done when, in approaching the problems of actual industry,—which, to a large extent, is in a state intermediate between perfect monopoly and perfect competition,—the economist flings the inquirer into the vague with the assurance that static standards will tend to prevail. In this intermediate state between perfect monopoly and perfect competition, hypotheses III. and IV. are never true, and hypothesis II. is frequently untrue.

A series of objections to the above listing of the implications of perfect competition may easily be imagined. It may be said, for example, that these are not all of the hypotheses that are consciously or unconsciously drawn into reasoning when the term "perfect competition" is used. This objection would simply indicate the more the confused state in which actual discussion is conducted. It may also be said that some of the hypotheses are corollaries under special conditions of the fundamental meaning of the term "competition." This will likewise be admitted, but with insistence upon the above statement, that all of the hypotheses are frequently subsumed under the one term "competition." It may be further objected that, in the enumeration of the above characteristics, perfect competition is confused with a perfect market. To this it may be replied that the confusion exists in current economics; that a perfect market is less frequently defined than perfect competition, and that there is room for maintaining that a perfect market is one in which competition is perfect.

II.

The paradoxes about to be presented have their origin in the shifting meaning of the term "competition" according as it embraces all or only a part of the above five hypotheses. The methodological fallacy which it is wished to mark consists in the extension of the method of reasoning relative to perfect competition, in the sense of the five hypotheses, into territories where only a part of the five hypotheses obtain, and in the projection of propositions relative to a state of industry described by the five hypotheses into conditions where competition exists only in its essential and fundamental meaning.

Suppose it is proved, under the hypothesis of perfect competition, that labor gets exactly what it produces.¹ Suppose, further, that, in consequence of a perfect monopoly of a particular industry, the price of the commodity produced has risen, and wages have fallen, thus affecting both consumers and labor. What would be the significance of a proposed remedy of these evils of monopoly in the form of competition, potential or actual? If there should be two or more competing producers instead of one monopolist, would their competition either remove or reduce the evils of monopoly? Exactly what is the meaning here of competition? It is not that the influence of the product of each producer upon price is negligible, nor that his product is small as compared with the total output. Besides, competition, in the strict and fundamental use of the word, may be of the keenest, and yet labor would get what it could, and price would not necessarily fall to

¹ There is a persuasive quality about these terms that is extremely unfavorable to the progress of inquiry in the field of wages. Quite frequently from "labor gets what it produces" the inference is drawn that labor gets all it should. A more just wording would be that labor gets what the assumed property rights and assumed organization of industry make possible, and the important question is not so much whether labor gets what it produces under those conditions, but rather why actual conditions make possible so small a product.

the level of perfect competition. If under perfect competition it is true that labor gets what it produces, then, when competition is only between a few producers, all that can be said is that labor, at least, produces what it gets.

This proposition should be examined in greater detail. We may approach the question by following a route that has been traversed by some of the ablest investigators who have explored the devious ways of economic theory. In the seventh chapter of Cournot's *Recherches sur les principes mathématiques de la théorie des richesses* two propositions of greatest theoretical interest are deduced. We shall at present take up the first. The chapter bears the heading "De la concurrence des producteurs." The use of this pathfinder makes of the term "competition" should be noted, particularly as his Chapter VIII. bears the title "De la concurrence indéfinie." The first proposition is announced as a result of the solution of a problem that may be stated as follows: Suppose there are two owners of two mineral springs supplying a water that has no cost of production. If the owners compete instead of forming a monopoly, what will be the price of the water as compared with the price under monopoly, and what will be the condition of equilibrium? Cournot's answers are:—

- (1) The price will be lower than the monopoly price and higher than the price under perfect competition;
- (2) The amount of water supplied will be greater than the amount supplied under perfect monopoly;
- (3) Stable equilibrium will obtain.

It is very doubtful whether these conclusions are regarded as more than platitudes to most readers of Cournot's classic. They are rather concerned to understand why Cournot should have resorted to the differential calculus to prove what, without its use, they already know. Cournot was quite aware of the certainty of this objection.

("Comme on est bien convaincu avant toute analyse le résultat de la concurrence est d'abaisser les prix," p. 94.) If his method of treating the question should, perchance, stimulate interest, it is probably, in most cases, because it is regarded as establishing what Von Thünen called "eine mathematisch sichere Grundlage."

Let us look into the history of this platitudinous "mathematisch sichere Grundlage" of pure economics. As is well known, the work of Cournot, published in 1838, was not reviewed in France until, in reply to the reproach of Professor Walras that the French had ignored their greatest economist, not having so much as reviewed his work, the Academician Joseph Bertrand attempted an appreciation of Cournot's method and results. This particular Chapter VII. was specially criticised. Bertrand first gives a general criticism of the *Recherches* in these terms:—

"Si la théorie des richesses de Cournot, malgré la science de l'auteur, la juste considération attachée à sa personne, l'influence de sa situation et le mérite de ses autres écrits, n'a pu, depuis un demi-siècle, attirer sérieusement l'attention, c'est que les idées s'y dérobent sous l'abondance des signes algébriques; la suppression des symboles réduirait le livre à quelques pages, et presque toutes offriraient alors de judicieuses réflexions et des assertions dignes d'intérêt."¹

Descending to particular criticism, the first mathematician of France undertook to show that Cournot's answers to the above questions were due to a mathematical blunder. Bertrand's own solution of the problem is:—

- (1) There will be no limit to the fall in price;
- (2) The amount of water supplied will reach the amount of satiety, provided the resources of the springs are adequate;
- (3) Equilibrium is impossible.

¹ *Journal des sciences*, September, 1883, p. 500.

What, we may ask, becomes of the platitudinous "mathematisch sichere Grundlage" of pure economics?

So far as concerns Bertrand's general criticism that Cournot's symbols mask his ideas, it may be said that, on the contrary, his attempt at symbolic precision precipitated the assumptions tacitly and unconsciously made in ordinary reasoning. Indeed, it is for this very reason that Cournot is taken to illustrate the current fallacy in non-symbolic economics. So far as concerns the particular criticism of the seventh chapter of Cournot's treatise, Bertrand's own conclusions, opposed in every point to those of Cournot, exemplify the paradoxical results that may be reached according to the shifting meaning of competition. Cournot's hypotheses are I., II., V. Bertrand's are I., II., and the negatives of III. and IV. Cournot's error is not a technical mathematical blunder. His conclusions follow rigidly from his premises. To decide between the two series of opposed conclusions, there is alone the test of conformity of the respective premises to reality. Considered from this point of view, there can be no doubt but that Bertrand is nearer the truth. This concession, however, brings home the facts:—

- (1) That the term "competition" undergoes a change of meaning according as competition is between many or a few competitors;
- (2) That there is needed a very careful study of the number of competitors that will render fallacious the usual form of treating economic equilibrium. For example, the value of θ in Professor Pareto's equations.¹

¹ The way Cournot reached his result and the source of his error may be seen from the following: Let there be two competitors producing respectively D_1 , D_2 , of the commodity. $D_1 + D_2 = D$, the whole amount produced. If p is put for the price of the commodity, then we may write

$$D = F(p), \text{ or } p = f(D) = f(D_1 + D_2).$$

According to hypothesis I., the maximum hypothesis of competition, each producer will independently try to make his income a maximum. Hence

$$D_1 \cdot f(D_1 + D_2), D_2 \cdot f(D_1 + D_2),$$

are two quantities whose maximum value are sought. If now hypothesis V., that

III.

The criticism will probably be offered that the problem just discussed is extremely hypothetical, and that in reality no such confusion in the use of the term "competition" would occur. Let us, therefore, take up the second proposition in Cournot's Chapter VII., to which reference has already been made. In this case the introduction of the law of cost brings the question nearer reality. The new problem may be stated as follows: If the water of the two mineral springs has a different cost of production to the respective owners, what will be the price of the output as compared with the price under the régime of perfect monopoly and the price under the régime of perfect competition, and what will be the condition of equilibrium? Cournot's solution is:—

- (1) The price will be lower than the monopoly price and higher than the price under a régime of perfect competition.

each producer orders the amount of his output irrespective of the effect of his act upon his competitors, might be used, we should have, according to the mathematical condition of a maximum,

$$(1) \frac{d}{dD_1} [D_1 \cdot f(D_1 + D_2)] = f(D_1 + D_2) + D_1 \cdot f'(D_1 + D_2) = 0$$

$$(2) \frac{d}{dD_2} [D_2 \cdot f(D_1 + D_2)] = f(D_1 + D_2) + D_2 \cdot f'(D_1 + D_2) = 0$$

These two equations may be written in the following form:—

$$(a) D_1 + pF'(p) = 0$$

$$(b) D_2 + pF'(p) = 0$$

By adding (a) and (b), we get

$$(c) F(p) + 2p \cdot F'(p) = 0$$

But, if the production of the commodity had been in the control of a single monopolist, we should have had

$$(d) F(p) + p \cdot F'(p) = 0$$

The root of (c) gives a value of p smaller than the root of (d). Therefore, it is argued, the result of competition is to lower prices. If the argument is reviewed, it will be seen that the conclusion is dependent upon the use of hypothesis V., and this hypothesis may properly be used only when hypotheses III. and IV. are concurrently true. In the problem before us neither III. nor IV. is true, and, consequently the use of V. is wholly arbitrary and illicit.

This problem has been discussed by Bertrand, *Journal des savants*, 1883, pp. 500–504; by Professor Edgeworth, *Giornale degli economisti*, July, 1897, pp. 20–31; by Professor Pareto, *Cours d'économie politique*, vol. i. pp. 67, 68; by Professor Fisher, *Quarterly Journal of Economics*, January, 1898, p. 126.

- (2) The amount produced will be more than under monopoly and less than under a régime of perfect competition.
- (3) There will be stable equilibrium.

The solution of this second problem is, thus far, identical with that of the first problem, and doubtless seems as platitudinous. But the conclusions are reached by using the same series of hypotheses I., II., V., and the reasoning is invalidated in consequence of the same illicit use of the premise V.

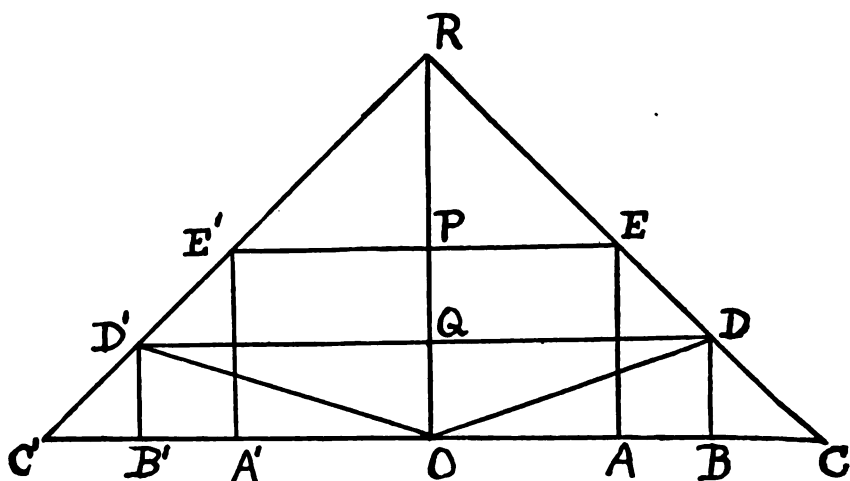
In the discussion of this problem Professor Edgeworth has rendered similar services to those of Bertrand in regard to the first. His conclusion is that the problem is indeterminate; that is, that there are an indefinite number of possible prices and amounts of commodity sold, and that consequently stable equilibrium is impossible.

Professor Edgeworth has succeeded in giving a graphic illustration, which may be reproduced here, of the indeterminateness of equilibrium in case of competing monopolists. The graphic treatment, however, is limited to an extremely simple hypothesis.

Suppose the competing monopolists¹ to be I., II. Suppose, further, (a) that each of the competitors sells to one-half of the consumers, (b) all of the consumers are alike in their desire for the commodity, and in their capacity to pay for it. Their demand curves are, therefore, alike. If we assume that the elementary demand curves may be represented by straight lines, then the demand for the output of I. may be represented by line *RC*, (see the figure) and

¹ The expression "competing monopolists," when employed in relation to a single commodity, seems a contradiction in terms, but its use has the sanction of Professor Edgeworth, whose investigations of monopoly are the most important contributions to exact economics since the work of Cournot. The distinction between competition, perfect competition, monopoly, perfect monopoly, rests upon a quantitative basis, and the odd sounding of "competing monopolists" in the above context is doubtless partly due to the lack of analysis of the terms in popular economics.

the demand for the output of II. by RC^1 . In both cases the amount of commodity is measured on the axis of abscissas and the price upon the axis of ordinates. (c) The law of cost is the same for the two competitors, and may be represented by OD, OD^1 . It is further supposed, in the diagram, that the amount of possible output of each producer is limited to OB, OB^1 , which in each case is equal to three-fourths of OC . OC is drawn equal to OR .



Upon these conditions it may be proved that, if the two producers acted as a unit, the price OP , which is one-half of OR , would be settled upon as affording the maximum net revenue. If, however, the price OP were to obtain, there would be an advantage for either producer—for example, I.—to throw upon the market any amount of product intermediate between PE and QD at a price less than OP by an amount as small as he pleased. Such a course on the part of I. would draw off a large part of the purchasers of II., thereby diminishing the latter's net profit. It would, therefore, be to the advantage of II. to throw upon the market any amount intermediate between PE^1

and QD^1 at a price less than the price fixed by I ., by an amount as small as he pleased. This underselling might continue until the price OQ were reached and the amount $OB + OB^1$ were sold. But the movement of price need not stop here. If the price OQ were reached, then it would be to the advantage of either producer, say of I ., to limit the amount of his output to PE or to an amount intermediate between PE and QD . II ., following his own advantage, would limit his output, and so the process would continue. Under the conditions of the problem there could be no resting-place.¹

The case just presented is intended simply to illustrate the phenomenon of indeterminateness. Professor Edgeworth has treated the general problem analytically in a way in which the conditions imposed, unlike those given above, are conditions approximating reality.

This second problem of Cournot's, owing to the introduction of the consideration of cost, has a keener interest for us than the preceding one. The contradictory results of the two investigators throw a new light on the doctrine that, under competition, the laborer gets what he produces. If we accept Cournot's method of treating the problem,—the method of projecting the process of reasoning applicable to unlimited competition into the field of limited competition,—we reach the conclusion that the more industry falls into the hands of a few competitors, the higher the price of the commodity, the narrower the opportunity for remunerative employment of labor. The theory that labor gets what it produces becomes the theory that his production is limited to the condition of maximum profit of his employer. And this is true, no matter how keen may be the degree of competition of employers. If we accept the criticism of Professor Edgeworth, which sets out from premises much nearer to the conditions of

¹ *Giornale degli economisti*, July, 1897, pp. 23, 24.

actual life, the problem is economically indeterminate, rates are fixed by non-competitive causes, and the doctrine that labor gets what it produces becomes the doctrine that labor at least produces what it gets.

IV.

Let us return for a moment to Cournot's second problem. As far as that problem has been treated, nothing extraordinary has appeared in his conclusions. Indeed, it seems probable that Cournot accepted his own results (1) because they seemed to be in harmony with common observation that competition reduces prices ("comme on est bien convaincu avant toute analyse, le résultat de la concurrence est d'abaisser les prix" (p. 94), (2) because they are in harmony with the doctrine of continuity which is fundamental in his general philosophy.¹ There would seem to be much in favor of conclusions deduced by mathematical method, confirmed by common experience and the philosophic doctrine of continuity.

It is very fortunate that the reasoning here is expressed in mathematical form, Bertrand's criticism notwithstanding; for there is less chance of dragging in new conditions, as is usually done when conclusions of economic reasoning are controverted. The very same equations that yield the three results above given, which seemed so commonplace, will also yield the following:—

*The producer of the greater amount of water, in case there are two producers, will have a marginal cost less than that of the producer of the less amount.*² In his discussion of this problem Cournot places no limitation upon the laws of cost, whether they are the laws of diminishing return, con-

¹ Compare his *Essai sur les fondements de nos connaissances*, vol. i., chap. xiii. Perhaps in no other system of philosophy is the doctrine, and even the phrase *natura non facit saltus*, of more frequent occurrence.

² Cournot, *Recherches*, p. 96.

stant return, or increasing return.¹ If the three platitudinous conclusions are accepted because they are deduced from Cournot's equations and confirmed both by a vague common experience and the philosophic doctrine of continuity, then we must also be prepared to at least follow the consequences of the above deduction from his equations.

Suppose the production of the water is subject to the law of diminishing return at both of the springs. We should then have the following paradox: In case of perfect competition, when the law of diminishing return is the law of production, the price of the product is equal to the marginal cost of production. In case of competition, when the law of diminishing return is the law of industry, the price of the product is greater than the marginal cost, and the marginal cost is less for the producer of the greater amount.

Or, if we take industry subject to the law of increasing return, we have this paradox:—

In case of perfect competition, equilibrium is impossible.² In case of competition there is stable equilibrium, price is greater than the marginal cost, and the producer of the greater amount has the lower marginal cost!

Cournot seems to have been the first to state the doctrine that equilibrium is impossible where industry is subject

¹ Suppose the laws of cost to the two competitors are symbolized respectively by $\phi_1(D_1)$, $\phi_2(D_2)$ where D_1 , D_2 , have the same meanings as in a previous note. Then according to hypothesis I., if $p = f(D_1 + D_2) = f(D)$, the competitors will independently seek the maximum values respectively of $[f(D) \cdot D_1 - \phi_1(D_1)]$, $[f(D) \cdot D_2 - \phi_2(D_2)]$. If hypothesis V. might be used, we should have, by the condition of a maximum,

$$(1) f(D) + D_1 \cdot f'(D) - \phi'_1(D_1) = 0$$

$$(2) f(D) + D_2 \cdot f'(D) - \phi'_2(D_2) = 0$$

Subtracting equation (2) from equation (1), we have

$$D_1 - D_2 = \frac{1}{f'(D)} [\phi'_1(D_1) - \phi'_2(D_2)] = F'(p) [\phi'_1(D_1) - \phi'_2(D_2)].$$

Here $F(p) = D$, and consequently $F'(p)$ is always negative. Therefore $D_1 \geq D_2$ according as $\phi'_1(D_1) \leq \phi'_2(D_2)$. Observe that in the treatment of the problem no restrictions are placed upon the signs of $\phi''_1(D_1)$, $\phi''_2(D_2)$.

² *Recherches*, p. 102.

to the law of increasing return, and yet the above paradox—or is it an absurdity?—flows from his equations.

Professor Marshall's animadversions upon the method of treating this problem are most illuminating for the following reasons:—

(1) They lead to his showing that the statical method is inadequate to deal with problems of increasing return. "The hypothesis of a stationary state is useful to illustrate many points in economics; but it is the nature of such hypotheses to be treacherous guides, if pursued far away from the starting-point. They soon lead us into a region of unreal abstractions, and, in particular, this one is not suitable for that part of the pure theory of equilibrium of normal demand and supply . . . which relates to industries that obey the Law of Increasing Return, a law that belongs essentially to an age of change and progress."¹

Accordingly, we find that nearly all manuals adopting the statical method of exposition make no mention of the law of increasing return. Or, if perchance the law is referred to, no hint is given of the nature of the modifications of the results previously deduced before they may be applied to industries subject to the law of increasing return.

(2) They lead to the illuminating mathematical Note XIV. in the Appendix to his *Principles*, in which a precise definition is offered of the term "marginal product of labor." From Notes III. and XIV. of the Appendix the following proposition may be deduced: The error of regarding the marginal product of labor as equal to the physical product of a unit of labor multiplied by the price per unit of the product is greater (a) the greater the proportion of the total output supplied by a producer, (b)

¹ *Principles*, 2d edition, pp. 484, 485. That the above was suggested by Cournot's problem may be seen by referring to the note, p. 485, of the same edition.

the less the degree of elasticity of demand for the product. In a word, the term "marginal product of labor" also changes its meaning according as the number of competing producers are many or few.

V.

The paradoxes thus far considered have been derived from the common theory of the supply of rival commodities. The case about to be discussed concerns the theory of complementary commodities, and will still further exemplify the fallacy of projecting methods of reasoning relative to a given state of industry and a given set of implicit hypotheses into an unexplored territory. Cournot's *Recherches* will again form the starting-point of the investigations. In the ninth chapter of that work the following problem is proposed: If to the making of a given commodity two factors of production are necessary, what is the condition of equilibrium, of the price of the commodity, and of the amount of the commodity supplied, when the factors of production are severally monopolized instead of being under the control of the maker of the finished good?

Cournot's solution is:—

- (1) The price will be higher than the price under a single monopoly.
- (2) Less will be produced than in the case of a single monopoly.
- (3) Equilibrium will be stable.

The way of reaching these extraordinary conclusions is described explicitly by Cournot, p. 114: "On applique à la théorie du concours des producteurs les raisonnements qui nous ont servi à analyser les effets de la concurrence." He confessedly follows the method of reasoning, dear to

the hearts of economists and sociologists, of arguing by analogy. In case of the supply of rival commodities, each producer competes for a part of the supply, and, by hypothesis V., orders the amount of his output without regard to the effects of his act upon the output of his competitors. In case of the supply of complementary commodities, each producer competes for a part of the price of the finished good, and alters the price of his own factor without regard to the effect of his act upon the prices of the factors of his competitors. Cournot's mathematics in this particular problem are based upon this analogy, and his conclusions are relative to these premises.

Suppose his analogy and conclusions are accepted. Then, by a not uncommon use of the term "competition," we find that, in case of complementary goods, the competition of factors of production, severally monopolized, for a share of the price of the finished good, leads to an increase of the price of the finished good over the price that would obtain under a single monopoly. The amount of the product is diminished, the field for the remunerative employment of labor is reduced, and wages fall. If these results are true, what becomes of the remedy for the evils of monopoly in the form of competition?

If objection is made to Cournot's propositions, the reply is offered that he simply followed the custom of economists of arguing by analogy, projecting the conclusions relative to one state of industry into another state, using a part of the hypotheses covered by the term "competition," and neglecting the rest.

When the premises of this particular problem are brought nearer to the facts of actual industry,—e.g., by Professor Edgeworth in his articles in the *Giornale degli economisti*,—it is found that here again the problem is indeterminate and rates are fixed by non-competitive causes.

The chief object of this paper has been to show some of the critical limitations of the current method of investigating economic questions, and to expose the bewildering vagueness of a fundamental term. Incidentally, certain statements have been made with regard to the theory that, as wages, the laborer gets what he produces. In order that these scattered statements may be brought together, and a view obtained of the extremely hypothetical character of that theory, a summary in a categorical form may be made:—

1. The doctrine that the laborer gets what he produces does not apply in case of perfect monopoly; and there are no statistics as to the proportion of industry actually monopolized.

2. The doctrine does not apply when the producers of a commodity are few in number. The current method of investigation, which leads to the projection of conclusions based on perfect competition into this field of competing monopolists, is fallacious. There are no statistics as to industries in this condition.

3. The doctrine needs serious modification in case of industries subject to the law of increasing return. The statical method is inadequate to deal with the problem. There are no statistics as to the proportion of industry in this state.

4. The doctrine does not apply in case of the monopoly of one or more complementary producers' goods. The projecting of the method and results of perfect competition into this field leads to most absurd conclusions. There are no statistics as to the proportion of industry in this state.

“Bien loin d'avoir songé à écrire dans un esprit de système et pour me ranger sous les bannières d'un parti, je pense qu'il reste un pas immense à franchir pour passer de la théorie aux applications gouvernementales; je

trouve que la théorie ne perd rien de son prix, en restant ainsi préservée du contact de la polémique passionnée; et je crois que si cet essai pouvait être de quelque utilité pratique, ce serait principalement en faisant bien sentir tout ce qui nous manque pour résoudre, en pleine connaissance de cause, une foule de questions que l'on tranche hardiment tous les jours."¹

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¹ Cournot's *Recherches*, p. xi.

THE COURT OF PIEPOWDER.

I. *Origin and General Development.*

IN recent years some attention has been devoted to the history of the law merchant, and our knowledge of the development of the more prominent commercial tribunals of Europe has been increased,¹ but no attempt has yet been made to investigate the history of the English court of piepowder, the humble court of the market or fair in which the disputes of wayfaring merchants, the dusty-footed men, were settled. Blackstone calls it "the lowest and at the same time the most expeditious court of justice known to the law of England."² The term "piepowder" ("piepoudres," "pede pulverosi") was not, however, applied to the tribunal, as Coke, Spelman, Cowell, and various other older writers believed,³ because justice was administered as speedily as the dust could fall or be removed from the feet of the litigants, but because the court was frequented by merchants with dusty feet, who wandered from mart to mart.⁴ Though this was one of the most

¹ Goldschmidt, *Handbuch des Handelsrechts*, 1891; Silbersehmidt, *Die Entstehung des deutschen Handelsgerichts*, 1894; Morel, *Les juridictions commerciales au moyen âge*, 1897; Huvelin, *Essai historique sur le droit des marchés et foires*, 1897; Mitchell, *An Essay on the Early History of the Law Merchant*, 1904.

² *Commentaries*, Book III., f. 32.

³ This explanation is not yet wholly obsolete. See Ben Jonson, *Bartholomew Fair*, ed. Cunningham, 1875, p. 547.

⁴ The following examples illustrate the use of the term "piepoudres." "Extraneus mercator vel aliquis transiens per regnum non habens certum mansionem infra vicecomitatum sed vagans qui vocatur piepowdrous hoc est anglie dustifute" ("Fragments Collecta," c. 29, ascribed to King David, 1124-1153; *Acts of Parl. of Scotl.*, i. 725). "Querelas transeuntium per villam qui moram non poterunt facere qui dicuntur pepoudrous" (15 Hen. III., *Liber Albus*, ed. Riley, 67). "Personas qui celerem habere debent justitiam sicut sunt mercatores quibus exhibetur justitia pepoudrous" (Bracton, f. 334). Right should be speeded to foreign plaintiffs "cum pepoudrous solom lei marchande" (*Mirror of Justices*, Book I., ch. 3). "Les plets entre gents estraunges qe lem appelle pepoudrous" (19 Edw. I., *Domes-*

active and wide-spread of all the tribunals formerly existing in England, it is difficult to find much information concerning it. Writers of the seventeenth and eighteenth centuries show some interest in the legal aspect of the subject,¹ but they present few details that can be turned to account by the historical investigator; and the modern text-books of economic and legal history dispose of it with a few vague words of explanations.² The local records that have been published contain many stray references to the court of piepowder, but they are fragmentary and difficult to piece together satisfactorily. The fullest source of information is a fourteenth-century treatise on the "Lex Mercatoria,"³ which is supplemented by the rolls of the fair courts of St. Ives (1275) and Leicester (1347).⁴ There is also a good deal of unpublished material in the rolls of piepowder courts and in borough customals which

day of Ipswich, 22). "Placita vocata pepouderes" (1340, *Cardiff Records*, ed. Matthews, i. 23; 1359, *Charters of Neath*, ed. Francis; 1360, Kenfig, *Archaeologia Cambrensis*, 4th ser., ii. 181). "Curia que vocatur pepouderous" (c. 1344, *Torksey*, below, p. 17). "Le courte de peepouderes," 22 Edw. III.; "in placitis pedis pulverosati," 16 Rich. II. (Southampton, *Hist. MSS. Com.*, xi. pt. iii. 8-10). "Curia de pipouderes," 1385, Newport in Wentloog; "placita pedis pulverisati," 1392, Shaftesbury (*Archaeologia*, xlviii. 438; *Records of Shaftesbury*, ed. Mayo, 4). "And plectid pipouderis alle manere pleyntis" (Langland, *Richard the Redeles*, iii. 319). "Ferrount a eux droit de jour en aultre come pipouderes," 1411; "curia pedis pulverisati, 1494 (*Red Paper Book of Colchester*, ed. Benham, 17, 125). "Courte l'abbe de Westm. de pipouderes," 1429 (*Rot. Parl.*, iv. 357). "Sicut alii extranei faciunt in curia que in vulgo dicitur pypouderes" (15th century, Woodruff, *Fordwich*, 263). "My servant is arrested in your cowerst of estrangers or comonley cawled a cowerst of pypouderes" (1573, Rye, *Hist. MSS. Com.*, xiii. pt. iv. 26). The plural ending of the name of the court was still in common use in the seventeenth century. See, for example, Ben Jonson, *Bartholomew Fair*, Act III. Sc. 1: "Can you answer this at the piepowder?" Cf. Coke, *Fourth Institute*, f. 272; Spelman, *Glossarium*, s. v. "pedis pulverisati curia."

¹ Crompton, *Jurisdiction of Courts*, 1594, f. 229; Coke, *Fourth Institute*, 1644, f. 272; Kitchin, *Jurisdictions*, 1651, ff. 195, 196; Bulstrode, *Reports*, 1658, ii. 21-25.

² Cunningham, *Growth of Industry*, 3d ed., i. 181, 452; Ashley, *Economic History*, 3d ed., i. 101; Palgrave, *Dictionary*, iii. 108; Rogers, *Six Centuries of Work*, 146; Walford, *Faire*, 26-31; Holdsworth, *History of English Law*, 308, 309. The paper by John Pettingall, "Of the Courts of Pypowder," in *Archaeologia*, 1770, i. 210-224, deals only with the origin of the name of the court.

³ *Little Red Book of Bristol*, ed. Bickley, 1900, i. 57-85.

⁴ *Select Pleas in Manorial Courts*, ed. Maitland, 130-160; *Records of Leicester*, ed. Bateson, ii. 72-74.

the future historian of this institution may turn to account.¹

The early history of markets in continental Europe has evoked much discussion, especially in Germany.² Royal grants of markets with jurisdictional rights, which are first mentioned on the Continent in the ninth century, are numerous from the tenth century onward, and such grants imply the establishment of local tribunals of justice for the administration of market law.³ Little information concerning the activity of these courts is found, however, in the works of modern writers, though they deal in detail with the courts of the great fairs, like those of Champagne and Lyons, which are prominent in the fourteenth and fifteenth centuries. These writers seem to have found no plea rolls of ordinary market or fair moots, and the name "piepowder" does not seem to have been applied to these tribunals on the Continent.⁴

In England, as on the Continent, the right to grant a market or fair was a royal prerogative or franchise, one of the "jura regalia."⁵ Soon after the Norman Conquest

¹ For some of the mediæval plea rolls, see *Hist. MSS. Com.*, iv. 429, v. 577, 578, vi. 477, xiii. pt. iv. 296, xv. pt. x. 28; Harrod, *Cal. of Court Rolls of Colchester*, 51-59. For later plea rolls, see below, p. 5, n. 4, p. 6 and p. 7, n. 2. A specimen of what may be found in borough customals is given in the note concerning Torksey, appended to this paper.

² See especially Rathgen, *Die Entstehung der Märkte in Deutschland*, 1881; Rietschel, *Markt und Stadt*, 1897; Keutgen, in *Neue Jahrb. für das klass. Alterthum*, 1900, v. 275-299; Huvelin, *Essai historique*. Huvelin and Sohm (*Die Entstehung des deutschen Städtewesens*, 1890) believe that the borough court was in its origin a mere market court.

³ Huvelin, 167-175.

⁴ The term "piepoudreux" was, however, occasionally applied to wandering merchants on the Continent. See Du Cange, *Glossarium*, s. v. "pede pulverosi" and "pulvereus"; Glanville, *Institutiones de la France*, vi. 481, n.

⁵ Kemble, *Saxons*, 1876, ii. 73, 74; for the Continent, Huvelin, *Essai*, 179-187, 388. "Feria est quedam libertas regalis quam nullus habere potest absque speciali concessionem domini regis" (*Placita de quo Warranto*, 24). One of the earliest references to a fair court in England is, however, found in a grant of Hugh, earl of Chester, to the church of St. Werburgh, late in the eleventh century: "si aliquis forisfecerit in nundinis illis omnia placita pertractentur in curia Sancte Werburge" (Dugdale, *Monasticon*, ii. 387; Ormerod, *Chester*, 1882, i. 287, cf. *Ibid.*, i. 14, 190). In France the great seigneurs, as well as the king, exercised the right to grant markets and fairs, but towards the close of the thirteenth century the crown reasserted its claim that this was a regalian privilege (Huvelin, *Essai*, 179-187).

some of these grants clearly specify the inclusion of jurisdiction ("sac and soc"). William the Conqueror gave to the church of St. Mary of Thorney a market at the manor of Yaxley with "sac and soc and toll."¹ A charter of Edward III. states that William Rufus granted to the bishop of Winchester the fair of St. Giles with all his rents and rights of jurisdiction ("redditus et justicias suas") within the city of Winchester, and that this was confirmed by Henry I.² Henry I. also granted a fair to Herbert Losinga, bishop of Norwich, "cum saca et soca et thol et theam et infangenetheof et aliis consuetudinibus omnibus que pertinent ad jus feriarum," and two other fairs "cum saca et soca et aliis consuetudinibus que pertinent ad jus ferie."³ In 1110 the same king granted to the abbey of Ramsey a fair at St. Ives "with soc and sac and infangthef, just as any fair has in England."⁴ The wording of these two documents implies that a court was an ordinary appurtenance of a fair in the time of Henry I., and this seems also to have been the case in Scotland in the first half of the twelfth century.⁵ Grants of fairs "with sac and soc and infangthef" were also made by Henry II.⁶

We find some data concerning the activity of market and fair courts during the thirteenth century,⁷ and the

¹ *Placita de quo Warranto*, 298. The charter was confirmed by Henry I., 1123-1135 (*Cal. of Charter Rolls*, i. 65).

² *Charter for St. Giles Fair*, ed. Kitchin, 26. Kitchin gives 1096 as the date of the charter of William Rufus. It is possible that "justicias" may mean revenues.

³ *Cal. of Charter Rolls*, i. 153. Herbert died in 1119.

⁴ *Cartul. Monast. de Rames.*, i. 240, ii. 101; cf. *Chronicon Rames.*, 221, 226, 286.

⁵ *Acts of Parl. of Scotl.*, i. 350, 725, 726; *Ancient Laws of Burghs of Scotland*, ed. Innes, 41, 42.

⁶ *Cartul. Abbat. de Whiteby*, i. 148.

⁷ "Ipsi [the bailiffs of the bishop of Hereford] facient justiciam omnibus querentibus et recipient inde amerciamenta durantibus predictis nundinis" (25 Hen. III., *Abbreviatio Placitorum*, 113). "Ballivi ipsius archiepiscopi [of York] durante feria custodient pacem civitatis" (21 Edw. I., *Placita de quo Warranto*, 223). The Quo Warranto Rolls (pp. 75, 137, 155, 217, 248, 298, 410, etc.) frequently refer to "judicialia ad mercatum pertinentia," the instruments of judicial punishment pertaining to a market or fair, namely, the pillory and the tumbrel.

documentary material is more abundant in the fourteenth and fifteenth centuries, when they flourished in boroughs and manors throughout England under the name of courts of piepoudres ("curia pedis pulverisati"). Indeed, from the reign of Edward IV. onward the judges at Westminster ruled that this tribunal was an appurtenance of every market or fair.¹ The statutes 17 Edward IV., c. 2, and 1 Richard III., c. 6, the only acts of Parliament directly relating to this branch of the judiciary, also state that to every fair there pertains a "court de peedowdrez," and they lay down certain rules to remedy abuses of its jurisdiction, notably to prevent the trial of actions concerning contracts or other matters that did not arise in the fair.²

During the sixteenth and seventeenth centuries the grant of a market or fair and a court of piepowder is often mentioned, especially in town charters,³ while the activity of these courts is attested by some surviving plea rolls and other local records,⁴ and by stray descriptions of their functions in the literature of the time. For example, in the first quarter of the seventeenth century Ben Jonson in his *Bartholomew Fair* portrays the doings of Judge Overdo in the "court of piepoudres"; and an entry in the records of Southampton, dated 1623, states that, owing

¹ This doctrine is clearly set forth in the Year Books: "a cheescun market est incident un court de pypoud' pour faire justice as marchants deins le market," 12 Edw. IV., f. 9, 22 Edw. IV., f. 33; "a un fair est incident un court de pipowders et per grant del' fair oeo passa," 8 Hen. VII., f. 4; "cheescun faire ad un court de pipowders," 12 Hen. VII., ff. 16, 17. See also *Doctor and Student*, f. 11; Coke, *Fourth Institute*, f. 272. The same doctrine is implied in the judgment of the princes and magnates of Germany, in 1218, that a royal grant of a market or fair excludes the jurisdiction of the count or other judge of the province (Keutgen, *Urkunden*, No. 66).

² Cf. *Rot. Parl.*, vi. 187, 188. The act of 17 Edw. IV. was made perpetual by the statute of 1 Rich. III.

³ *Munic. Corp. Com.*, Index (Parl. Papers, 1839, vol. xviii.), 489, 490. This court is mentioned in sixteen royal charters or patents granted to Colchester between 1462 and 1818 (*Charters of Colchester*, ed. Benham).

⁴ *Hist. MSS. Com.*, v. 586, x. pt. v. 287, 288, 335, xii. pt. ix. 432, 519, xiii. pt. iv. 26, 35; *Records of Portsmouth*, ed. East, 1891, p. 163; *Records of Leicester*, ed. Bateson, iii. 275.

to the use of the town hall for theatrical purposes by stage-players, the mayor and bailiffs coming to the hall to administer justice in the piepowder courts, "which are there to be holden twice a day, if occasion so require, cannot sit there in decent order."¹ A century later Defoe says of Stourbridge Fair: "Here is a court of justice always open, and held every day in a shed built on purpose for the fair. . . . Here they [the magistrates of Cambridge] determine matters in a summary way, as is practised in those we call pyepowder courts in other places, or as a court of conscience, and they have final authority without appeal."²

But the increase of wealth, bringing a permanent and continuous local demand for commodities, together with the improvement of transport facilities and means of communication, due largely to the creation or repair of roads in the eighteenth century, diminished the importance of fairs and periodical markets, and tended to sap the vitality of the old tribunals of justice or rendered many of them wholly obsolete.³ Blackstone says that in his day they are "in a manner forgotten,"⁴ and his contemporary Barrington states that "we hear little of these courts at present."⁵ As in the case of the court leet and many other old English institutions, the death-struggle was, however, protracted far into the nineteenth century. There are records of a piepowder court at Eye from 1732 to 1813,⁶

¹ *Hist. MSS. Com.*, xi. pt. iii. 28.

² Defoe, *Tour through Great Britain*, 1748, i. 98. The work was first published in 1724. For the court of Stourbridge Fair in the sixteenth century, see Walford, *Fairs*, 70, 71, 75, 86.

³ For the improvement of roads, especially in the eighteenth century, see Cunningham, *Growth of Industry*, 1903, ii. 535-540. "Ce sont les foires qui ont contribué pour une bonne part au perfectionnement et au développement de moyens de relations plus faciles et moins coûteux; et ce sont ceux-ci qui, par leur extension, ont fini par tuer les foires" (Huvelin, *Essai*, 22).

⁴ *Commentaries*, Book III., f. 33. For a grant of a piepowder court in Blackstone's time (1762), see *Cal. of Home Office Papers*, 1760-1765, p. 237.

⁵ Barrington, *Observations on the Statutes*, 3d ed., 1769, p. 381.

⁶ *Hist. MSS. Com.*, x. pt. iv. 535.

and in 1835 sessions of such courts were still held occasionally in several boroughs.¹ They continued to be held at Bartholomew Fair, London, until about the middle of the nineteenth century, and at Hemel Hempstead until 1898;² and the form of proclaiming the opening of the court seems still to be observed at Bristol and Newcastle-upon-Tyne.³

As much of our information concerning these tribunals comes from the boroughs, attention must be called to the fact that a borough might have a court of piepowder during the time of a market or fair, or such a court might be a section of the municipal judicature, with sessions from day to day, if necessary, even when there was no market or fair.⁴ In fact, it became a rule of law that there might be such a court in boroughs without a fair or market.⁵ Sometimes the proceedings of a piepowder court are entered in the ordinary plea rolls of the borough court, as though the former tribunal were regarded as a mere phase or special session of the latter without any separate organization of its own.⁶ In some towns, on the other hand, we find distinct piepowder rolls,⁷ the existence of which

¹ *Munic. Corp. Com.*, Index, 1839, p. 489.

² Morley, *Memoirs of Bartholomew Fair*, 1880, pp. 346, 347, 385; Carter, "Early History of Law Merchant," in *Law Quarterly Review*, xvii. 237. The proceedings of the court of Bartholomew Fair from 1790 (to about 1853 are extant (*Notes and Queries*, 2d ser., vii. 498).

³ Cole, "English Borough Courts," in *Law Quarterly Review*, xviii. 382, 386; cf. *Notes and Queries*, 6th ser., iv. 235. For similar proclamations in the second half of the nineteenth century, see *Ibid.*, iv. 330; *Report on Market Rights and Tolls*, ii. 55; *Yorkshire Archaeological Journal*, xvii. 252; Walford, *Fairs*, 157, 159, 205.

⁴ *Little Red Book of Bristol*, i. 57; *Liber Albus*, 67, 173; *Abbreviatio Placitorum*, 140; Holloway, *Rye*, 148; Lyon, *Dover*, ii. 357; *Borough Customs*, ed. Bateson, i. 85; Woodruff, *Fordwich*, 218, 242, 250, 263; Boys, *Sandwich*, 452; *Charters of Cambridge*, ed. Maitland, 84; Swinden, *Yarmouth*, 160, 161; *Archæologia Cambrænsis*, 4th ser., ii. 181; *Charters of Nottingham*, ed. Stevenson, 56-58; *Hist. MSS. Com.*, xi. pt. iii. 8. According to the ordinances of Waterford (1574), a case concerning a stranger may be removed from the ordinary town court to the piepowder court, "and nothing [is] altered but the title or style of the court" (*Hist. MSS. Com.*, x. pt. v. 335).

⁵ *Year Books*, 13 Edw. IV., f. 8; Coke, *Fourth Institute*, f. 272.

⁶ *Hist. MSS. Com.*, iv. 429, v. 577, 578, vi. 544, 575; Hedges, *Wallingford*, i. 380; Moule, *Cat. of Charters of Weymouth*, 43, 44.

⁷ Above, p. 3, n. 1; below, p. 10, n. 1.

indicates a separate tribunal; and it is sometimes clearly stated that the piepowder court could be held only during the time of the market or fair.¹ When it was a special session of the borough moot, it sat from time to time, as need required, for the benefit of visiting traders or strangers ("extranei"), and tried only suits in which they were concerned; pleas between burghers were excluded from its jurisdiction.² In this connection we may also note the fact that the principal fair might be under the control of a bishop or abbot, and during its continuance supreme judicial authority over the city might be placed in his hands, ordinary jurisdiction being vested in his piepowder court to the exclusion of the borough court.³

II. Organization, Jurisdiction, and Procedure.

The court of piepowder was held before the mayor or bailiffs of the borough,⁴ or before the steward if the market or fair belonged to a lord.⁵ The mayor or steward was

¹ Blomefield, *Norfolk*, 1806, iii. 151, 152; *Minutes of Canterbury*, by Civis, No. 41. "Curie mercatorie que . . . habent teneri apud le tolhous de B. diebus mercatoribus," 27 Elis. (Burrough, *Collectanea Buriensis*, British Museum, Addit. MSS. 17391, f. 159). The court sat at Colchester and Hereford "ratione mercati" (Cutts, *Colchester*, 161; Rastell, *Entries*, f. 168). The profits of the "curia mercati" or "court de pepoudres" are distinguished from those of the "curia villae" or portmote at Boston, 8 Edw. I., and at Leicester about 1462 (*Registrum Honoris de Richmond*, app. 37; *Records of Leicester*, ed. Bateson, ii. 272). At Southampton the "common court" of the town is distinguished from the "court de pepoudres," 22 Edw. III. (*Hist. MSS. Com.*, xi. pt. iii. 9, 10).

² See the references above, p. 7, n. 4, especially *Hist. MSS. Com.*, xi. pt. iii. 8, 9; Swinden, *Yarmouth*, 160, 161; and the Customal of Torksey, below, p. 18.

³ *Abbreviato Placitorum*, 113, Hereford; *Placita de quo Warranto*, 221, 223, York; *Charter of Edw. III. for St. Giles Fair*, ed. Kitchin, 19-21, 30. Winchester; Dallaway, *Sussex*, i. 206, Chichester; *Cartulary of St. Frideswide*, i. 37, 70, Oxford; Boase, *Oxford*, 71; *Stanley v. the Mayor of Norwich*, 31; Blomefield, *Norfolk*, 1806, iii. 72.

⁴ *Little Red Book of Bristol*, i. 59, 70; Blomefield, *Norfolk*, 1806, iii. 151; Waylen, *Marlborough*, 106; *Cardiff Records*, ed. Matthews, i. 22, 23; Madox, *Firma Burgi*, 135; *Archaeologia*, xlviii. 438; *Munic. Corp. Com.*, 1835. iv. 2156, 2404, 2447; *Hist. MSS. Com.*, x. pt. v. 335; *Records of Shaftesbury*, ed. Mayo, 4.

⁵ *Little Red Book of Bristol*, i. 59, 70, 71; *Year Books*, 6 Edw. IV., f. 3; *Baronis de Kemys*, 78; *Select Pleas in Manorial Courts*, ed. Maitland, 138; Statute 17 Edw. IV., c. 2.

often assisted by two citizens or "discreets."¹ According to a letter patent of 1277, four sergeants were to help the bailiffs and reeve administer justice at the fair of Great Yarmouth.² Three keepers of the fair of the abbot of Abingdon, "bearing wands," are mentioned in 1295.³ The fair at Leicester was in charge of the mayor and three stewards.⁴ At Winchester the bishop's justiciars were assisted by three or four men, who saw that the precepts of the court were executed.⁵ According to royal charters granted to Kilkenny in 1385 and to New Ross in 1389, four men of the town were to be elected "barons" to hold the pleas of the fair.⁶ Until the latter part of the seventeenth century the officers of the court of Bartholomew Fair, in London, were an "associate" and six sergeants-at-mace.⁷ In 1268 Henry III. granted to the citizens of London the right to appoint four or five of their number to try "pleas of merchandise" in which they were concerned in any fair throughout England, and the same privilege is mentioned in various town charters modelled after that of London in the reign of Edward I.⁸ In 1274 three men were assigned to hear all pleas of the citizens of London at the Boston Fair, "without any bailiff of the fair."⁹ The fourteenth-century treatise on the Law Mer-

¹ *Liber Albus*, 67; Bulstrode, *Reports*, ii. 21; *Little Red Book of Bristol*, i. 79. The special court for merchants in each staple town was in charge of a mayor and two constables (Gross, *Gild Merchant*, i. 144); and the commercial court of Ferrara comprised a jurist and two merchants (Morel, *Les juridictions commerciales*, 70).

² *Cal. of Patent Rolls*, 1272-1281, p. 204.

³ *Ibid.*, 1292-1301, p. 211.

⁴ *Records of Leicester*, ed. Bateson, ii. 113, 254, 453, 454.

⁵ *Charter of Edw. III. for St. Giles Fair*, 33.

⁶ *Chartas Hibernias*, 81, 85.

⁷ Morley, *Bartholomew Fair*, 1880, pp. 346, 347.

⁸ *Liber Custumarum*, ed. Riley, i. 252; Roberts, *Hist. and Antiq. of Lyme Regis*, 25; Petyt MS., Inner Temple Library, No. 536, xiii. 225 (Newton, Dorset), xiv. 216-221 (Melcombe Regis).

⁹ *Liber de Antiquis Legibus*, 171. In 1298 four citizens of London were appointed keepers or wardens at Boston Fair (*Letter Book B*, ed. Sharpe, 219). During the fourteenth century the number appointed for the fairs of Boston and Winchester varies from three to fifteen (*Letter Book C*, 98-100; *D*, 233; *E*, 239, 284, 286, 291, 303; *F*, 215).

chant preserved at Bristol says that every mercantile court ("curia mercatoria") also had a clerk, a seal, and plea rolls.¹

In some places there were two regular sessions daily, one in the morning and the other in the afternoon.² We often also hear that sessions are held or pleas are adjourned from hour to hour and day to day.³ The court took cognizance especially of cases in which any stranger ("extraneus") or wayfaring trader was a party;⁴ and its jurisdiction comprised actions concerning debt, contract, and trespass,⁵ including breaches of the assize of bread and beer, for the punishment of which every market or fair was required to have "judicialia," namely, a pillory and a tumbrel.⁶ The author of the treatise in the *Little Red Book of Bristol*, says (i. 57) that all pleas, except pleas of land, could be tried. He should also have excepted serious crimes, the trial of which would usually be reserved for the coming of the royal justices;⁷ but sometimes even

¹ *Little Red Book of Bristol*, i. 77; cf. *Ibid.*, 80-85. For the seal, see also Madox, *Formulare*, 18; cf. Huvelin, *Essai*, 476. For plea rolls, see above, pp. 3, 5, and *Charter of Edw. III. for St. Giles Fair*, 33.

² *Little Red Book of Bristol*, i. 57; *Year Books*, 7 Hen. VI., ff. 18, 19; Rastall, *Entries*, 168; *Hist. MSS. Com.*, xi. pt. iii. 28; *Notes and Queries*, 6th ser., iv. 235; Holloway, *Rye*, 148; *Acts of Parl. of Scot.*, i. 726; and the Customal of Torksey, below, p. 17. Some of these references seem to indicate that 9 a.m. and 3 p.m. were favorite hours for holding the court. On the Continent adjournments were usually from the morning until the afternoon (Huvelin, *Essai*, 420).

³ *Domesday of Ipswich*, 22; Madox, *Firma Burgi*, 135; Woodruff, *Fordwich*, 218, 242, 259, 263; *Hist. MSS. Com.*, x. pt. v. 288; *Little Red Book of Bristol*, i. 57; *Charter for St. Giles Fair*, 31; *Liber Albus*, 67, 173, 390.

⁴ *Little Red Book of Bristol*, i. 68; *Baronia de Kemys*, 78; *Hist. MSS. Com.*, x. pt. v. 335; cf. above, p. 8.

⁵ *Archaeologia*, xlviii. 438, 440; Statute 17 Edw. IV., c. 2; *Chartas Hibernias*, 81, 85; Madox, *Firma Burgi*, 135.

⁶ *Placita de quo Warranto*, 75, 137, 154, 217, 248, 298, 370, 372, 380, 410, 414. Breaches of the assize should be punished not by fine, but by the pillory or the tumbrel (*Ibid.*, 155). Fines or amercements were, however, imposed upon litigants and offenders. See *Cal. of Patent Rolls*, 1272-1281, p. 204; 1476-1485, pp. 93, 131, 154, 158; Jenkins, *Reports*, 211; *Chartas Hibernias*, 81, 85; *Hist. MSS. Com.*, x. pt. v. 287, 288; *Little Red Book of Bristol*, i. 61; Ormerod, *Chester*, 1882, i. 287; Customal of Torksey, below, p. 18.

⁷ *Cal. of Patent Rolls*, 1272-1281, p. 204.

these were included within the jurisdiction of the court. The justiciars of St. Giles Fair, at Winchester, were vested with authority to hold crown pleas and pleas concerning land;¹ and the abbot of St. Werburgh claimed that during his fair at Chester he had the right to try appeals of felony, except for the death of a man.²

There seems to have been no limitation of the amount involved in a suit. The Customal of Torksey expressly states that the court has cognizance of covenants, contracts, trespasses, and debts, for amounts above and below forty shillings.³ By the Statute 17 Edward IV., c. 2, its jurisdiction was limited to things happening or actions arising within the precinct of the fair and during the continuance of the particular fair at which the court was held,⁴ the plaintiff being obliged to take an oath that "the contract or deed . . . was made or committed within the fair and within the time of the said fair where he taketh his action"; but judgment could be deferred until the time of another fair or market,⁵ and, according to older usage, a plea could be moved "in curia mercati de re facta extra limites mercati."⁶

¹ *Charter of Edw. III. for St. Giles Fair*, 35, 37.

² Ormerod, *Chester*, 1882, i. 288, 31 Edw. III. On the Continent the jurisdiction of the courts of markets and fairs usually excluded "justicia sanguinis" (Huvelin, *Essai*, 413).

³ Below, p. 18. For examples of amounts beyond forty shillings, see *Little Red Book of Bristol*, i. 59; *Year Books*, 7 Hen. VI., ff. 18, 19; Cutts, *Colchester*, 161; *Select Pleas in Manorial Courts*, 146, 152; *Cal. of State Papers*, Domestic, Charles I., 1631-1633, pp. 192, 201 (a suit for £500).

⁴ This rule was also applied to markets (Coke, *Fourth Institute*, f. 272). It was not, however, applied to boroughs in which a piepowder court might be held by custom when there was no market or fair (Croke, *Reports*, Jac. I., 313).

⁵ *Little Red Book of Bristol*, i. 57, 63; *Charter of Edw. III. for St. Giles Fair*, 32; Cutts, *Colchester*, 161; Jenkins, *Reports*, 211, 212; Morley, *Bartholomew Fair*, 1890, p. 76.

⁶ *Little Red Book of Bristol*, i. 70, 80-85; *Charter of Edw. III. for St. Giles Fair*, 30; *Archæologia*, xlviii. 438; Ormerod, *Chester*, 1882, i. 287; Customal of Torksey, below, p. 18. Continental usage was in accordance with the general rule laid down in the statute of Edward IV. See Huvelin, *Essai*, 413, 415; Morel, *Jurisdictions*, 96.

In the Middle Ages the merchants were the suitors or doomsmen; they found the judgment or declared the law.¹ But in the time of Edward IV. the justices at Westminster held that the steward or chief officer of the court was the judge, and hence a party might have a writ of error, but not of false judgment.² Though the appellate jurisdiction of the courts at Westminster was usually recognized,³ their authority to hear appeals was sometimes denied or questioned.⁴

In the procedure of the piepowder court the burden of proof was thrown upon the plaintiff. The "lex mercati," says a writer in the fourteenth century, does not admit any one "ad legem in parte negativa, sed semper in ista lege querentis est probare."⁵ The plaintiff must prove his case by a deed, tally or witnesses (a "secta") examined in open court.⁶ Before judgment is given, the defendant may, however, declare himself prepared to convict the plaintiff and his "secta" or "testes" of perjury. A day is then set for him to bring a "secta" to prove this. The plaintiff may "afforce his secta"; and he whose proof is

¹ "In omni curia mercati singula judicia reddi debent per mercatores ejusdem curie et non per majorem nec per senescallum mercati" (*Little Red Book of Bristol*, i. 70). For the suitors, see *Ibid.*, 71, 78; they are liable to penalties for false judgment, *Ibid.*, 71, 78. For the merchants as doomsmen, see also Pollock and Maitland, *English Law*, 1st ed., i. 450; *Select Pleas in Manorial Courts*, 130, 136, 137, 147, 149; Mitchell, *Essay on Law Merchant*, 73, 156.

² *Year Books*, 6 Edw. IV., f. 3.

³ *Little Red Book of Bristol*, i. 57. For some cases of appeal, see Dyer, *Reports*, 132; Jenkins, *Reports*, 211, 212; Bulstrode, *Reports*, ii. 21-25; Madox, *Firma Burgi*, 135. For appeals from the staple courts to the king's council, see Statute 27 Edw. III., st. 2, c. 21.

⁴ Swinden, *Yarmouth*, 161; Defoe, *Tour through Great Britain*, 1748, i. 98. For the limitation of appeals by the law merchant on the Continent, see Mitchell, *Essay*, 13; Morel, *Jurisdictions*, 214; Goldschmidt, *Handbuch*, i. 175.

⁵ *Little Red Book of Bristol*, i. 58. In some cases the defendant is, however, allowed to prove his case (*Ibid.*, i. 66).

⁶ *Ibid.*, i. 63-65, 69, 79; *Fleta*, ff. 132, 137, 138; *Chartae Hiberniae*, 81, 85; *Select Pleas in Manorial Courts*, 133; Boys, *Sandwich*, 447-452; Woodruff, *Fordwich*, 259-263; Holloway, *Rye*, 149. For proof by tally, see also *Liber Albus*, ed. Riley, 294; *Charter of Edw. III. for St. Giles Fair*, 32; *Domesday of Ipswich*, 126; Pollock and Maitland, *English Law*, 1st ed., ii. 213.

better wins. This process is called "attaint."¹ We also often hear of compurgation and the inquest as forms of trial or modes of proof.² In an inquest in which any alien merchant was concerned, the verdict was found by a jury "de medietate linguæ," aliens comprising half the jurors.³

A striking feature of the court of piepowder was its summary procedure. Already in the twelfth century custom in some parts of England and Scotland required that pleas concerning wayfaring merchants should be settled before the third tide.⁴ Bracton (f. 334) speaks of the need of expedition in deciding such cases: "propter personas qui celerem habere debent justitiam, sicut sunt mercatores quibus exhibetur justitia pepoudrous."⁵ "Que nul marchant foreyn soit delaie par lunge traine du pley," "hastif remedie lour soit fait," and similar injunctions are often found in the records from the thirteenth century onward.⁶ Formalities were avoided,⁷ few essoins were allowed,⁸ and an answer to the summons was expected within a day, often indeed within an hour.⁹ If judgment is against the

¹ *Little Red Book of Bristol*, i. 78-80.

² *Ibid.*, 63, 65, 69, 79; *Select Pleas in Manorial Courts*, 138-160; *Hist. MSS. Com.*, v. 577, 578; *Charter of Edw. III. for St. Giles Fair*, 31; *Abbreviatio Placitorum*, 140; *Year Books*, 7 Hen. VI., ff. 18, 19; and the *Torksey Customal*, below, p. 18. For the use of witnesses, deeds, and compurgators on the Continent, see Huvelin, *Essai*, 424.

³ *Liber Custumarum*, ed. Riley, 207, 208; *Liber Albus*, 216; *Chartas Hibernias*, 40; *Statute 27 Edw. III.*, st. 2, c. 8.

⁴ Stubbs, *Select Charters*, 112; *Baldon Book*, ed. Greenwell, app. xli.; *Acts of Parl. of Scotl.*, i. 334, 726; *Ancient Laws*, ed. Innes, 6. Cf. *Abbreviatio Placitorum*, 140; Gilbert, *Cal. of Dublin Records*, i. 228; *Little Red Book of Bristol*, i. 57 (ad-jourments from day-tide to day-tide).

⁵ Cf. *Mirror of Justices*, Book I., ch. 3.

⁶ *Liber Albus*, 67, 295, 296, 390; *Liber Custumarum*, 207, 208; Woodruff, *Fordwich*, 263; Boys, *Sandwich*, 452; *Little Red Book of Bristol*, i. 58; *Abbreviatio Placitorum*, 140; *Chartas Hibernias*, 40.

⁷ *Liber Albus*, 295.

⁸ *Acts of Parl. of Scotl.*, i. 726; *Domesday of Ipswich*, 22-26; Swinden, *Yarmouth*, 143, 144; Woodruff, *Fordwich*, 218, 242; Lyon, *Dover*, ii. 291, 293; *Little Red Book of Bristol*, i. 59-63; *Customal of Torksey*, below, p. 18.

⁹ Above, p. 10, n. 3; Woodruff, *Fordwich*, 259, 263; Boys, *Sandwich*, 443, 452.

defendant and he does not pay his debt, his goods are seized forthwith, appraised, and sold.¹ The expedition with which a suit might be terminated is well illustrated by the following case at Colchester in 1458 or 1459:—

Piepowder court held at the moot-hall before the bailiffs, according to the custom of the town beyond memory, and by reason of the market held all day, on Friday before the feast of the Invention of the Holy Cross, at the eighth hour in the forenoon of that day.

To this court came Thomas Smith, who complained that Cristina van Bondelyng was indebted to him for £60 10s. 10d., and he found pledges to prosecute his suit; and the sergeant was ordered to summon her before the court at the ninth hour.

At the ninth hour, plaintiff being present, but defendant not appearing, precept was issued to the sergeant to attach her goods and chattels so that she should appear at the tenth hour.

At the tenth hour, defendant not appearing, the sergeant certified that he had attached twenty-three woollen cloths belonging to her. An order was made to record a first default and to summon her for the eleventh hour.

Again at the eleventh hour, no defendant appearing, a second default was recorded, and a summons issued for her appearance at the first hour after noon.

At that hour, defendant being still contumacious, a third default was recorded. Plaintiff was permitted to prove his debt, and appraisers were sworn to inspect and value the goods seized. Judgment was recorded for plaintiff for his debt and 26s. 8d. damages.

At the fourth hour after noon the appraisers returned the value of the goods at £61 4s., which were delivered to the plaintiff; and he found pledges to answer defendant in the same court, should she plead in a year and a day [*i.e.*, on the fair day in the following year].²

¹ *Little Red Book of Bristol*, i. 60; *Charter of Edw. III. for St. Giles Fair*, 32; *Cutts, Colchester*, 161; *Customal of Torksey*, below, p. 18.

² *Cutts, Colchester*, 161; *Harrod, Report on Colchester Records*, 5. For an example of the summary procedure at Hereford, see *Rastell, Entries*, ff. 168, 169.

III. *Influence upon the Law Merchant and upon the Procedure of the Royal Courts.*

It is evident that the procedure of the court of piepowder resembles the procedure of the international law merchant as it was administered in all European tribunals.¹ The "lex mercatoria" was a customary law that grew up gradually through the intercourse of merchants; and special rules relating to litigation in mercantile transactions existed already in the eleventh century.² Outside of Italy little is known, however, concerning the law merchant before the thirteenth or fourteenth century, when it is administered in the cities of Italy and Spain and in the great fairs of Champagne. In England such a separate body of law was in operation in the piepowder courts long before the creation of special commercial tribunals, like those of the staple, which were adapted mainly to the needs of alien merchants. Already in the twelfth century there seems to have been a "lex de pede pulveroso" in Scotland and England,³ and in the thirteenth century there is a body of rules in English boroughs, markets, and fairs known as the "lex mercatoria,"⁴ which must have originated largely in the piepowder courts. We may, indeed, safely assume from the evidence afforded by royal grants of fairs and markets with toll and jurisdictional rights that

¹ "Ley marchant que est ley universal par tout le monde" (*Year Books*, 13 Edw. IV., f. 9). For the summary procedure on the Continent, see Huvelin, *Essai*, 418-420; Goldschmidt, *Handbuch*, i. 173, 229, 236; Morel, *Jurisdictions*, 60-65, 112; Mitchell, *Essay on Law Merchant*, 12-16.

² Goldschmidt, i. 125; Mitchell, 10-12, 25, 26; Pirenne, in *Revue Historique*, liv. 86.

³ *Acts of Parl. of Scoll.*, i. 726.

⁴ For some references to the law merchant in markets, fairs, and boroughs during the reigns of Henry III. and Edward I., see *Liber Custumarum*, 207, 208, 252; *Fleta*, Book II., chs. 58, 63; *Mirror*, Book I., ch. 3; *Domesday of Ipswich*, 106, 127, 137; *Chartas Hiberniae*, 40; *Cal. of Patent Rolls*, 1272-1281, pp. 204, 285; *Hist. Doc. of Ireland*, ed. Gilbert, 297-300. Cf. Holdsworth, *English Law*, 303; *Abbreviatio Placitorum*, 321 (8 Edw. II., "lex mercatoria in omnibus et singulis nundinis per totum regnum"); *Ibid.*, 280, 353.

such courts were active throughout Western Europe during the eleventh and twelfth centuries, and through the decisions of the merchant doomsmen were establishing legal precedents which must have exerted a powerful moulding influence upon the law merchant. In short, the "lex de pede pulveroso" of the eleventh and twelfth centuries must be regarded as the progenitor of the "lex mercatoria" of the thirteenth and fourteenth centuries. The historians who have investigated this branch of the law have concentrated their attention upon the great fairs, which flourished in the fourteenth century, and have neglected the humble piepowder courts, which flourished at an earlier period and which, as some of these writers admit,¹ played a prominent part in the creation and development of the law merchant.²

The piepowder courts are also interesting on account of their early use of a rational method of proof. We have seen that they required the production of evidence by witnesses openly examined in court. This feature of the procedure was well known in the fourteenth century, when compurgation was still in common use in the borough courts and when the examination of witnesses distinct from the jury was not yet firmly established in the royal tribunals at Westminster. When the local records have been more carefully investigated, it may be found that the production of proof based on the examination of witnesses was well known in the piepowder courts long before the fourteenth century, and that these courts helped to rationalize the procedure of the royal tribunals.

¹ Morel, 97; Mitchell, 22, 27, 38; cf. Holdsworth, *English Law*, 312. Huvelin (p. 596) seems to make "la conception d'un droit des marchands" emerge from "le droit des grandes foires." Goldschmidt (i. 180) disposes of the ordinary "Messgerichte" very summarily; likewise, Morel (p. 96).

² The author of the Bristol treatise begins his work with the words "lex mercatoria a mercato pervenire sentitur" (he uses "mercaturum" in a broad sense to cover fairs as well as markets). He also uses "lex mercati" and "lex mercatoria" as synonyms. See *Little Red Book of Bristol*, i. 57, 58.

But, entirely apart from the influence which the court of piepowder may have exerted on the formation of the law merchant and on the development of legal procedure, this tribunal is worthy of more attention than it has heretofore received, because, as we have seen, it was active during several centuries in all parts of England. It may, indeed, have been almost as common and as active as the manorial courts, for fairs and markets were wide-spread throughout England until the eighteenth century.¹ Not only because it was a separate organic unit in the judicial machinery of England, but also because the careful investigation of its history will throw needed light on the organization of mediæval commerce, we are justified in urging, in the interests both of legal and economic history, that the local archives should be exploited for more data concerning this interesting branch of the judicature.

NOTE.²

THE CUSTOMAL OF TORKSEY.

*Curia de pepoudres.*³ Item dicunt quod due curie semper fuerunt et ad hunc sunt in villa de Torkesay, quando necesse fuerit, pertinentes⁴ ad dominum de Torkesay. Et consuetudo et usus est dicte curie tenende in hac forma. Una curia⁵ que vocatur pepouderous tenta erit bis in die et de die in diem, quando necesse fuerit,

¹ See the list of grants of markets and fairs in the "Reports of the Commission on Market Rights and Tolls," *Parl. Papers*, 1888, liii. 108-131.

² This note contains an extract from a customal preserved in the British Museum, Cottonian Charters, ii. 14, which appears to have been compiled not long after 1344. It gives the finding of a jury regarding the liberties and customs of Torksey, a borough in Lincolnshire. In 1345 the burgesses of this town, at the request of their lord, John Darcy, received a grant from Edward III. confirming a charter of Henry II., which allowed them to have a market, as in the time of Henry I. See *Cal. of Patent Rolls*, 1343-1345, p. 466.

³ This heading is in the margin of the membrane. In the text which follows there are many obvious errors of the scribe in grammar and spelling.

⁴ MS. "pertinens."

⁵ The other court was the burghmote, which was held weekly on Monday.

ante prandium et post prandium pro mercatoribus et forinsecis transeuntibus ad habendum cognitionem de convencionibus, contractibus, transgressionibus, debitis, tam transeuncia xl. solidos quam infra, et querelis et plegiis aequitandis et consimilibus ubicumque fuerint facta. Et querens et deffendens vel unus vel alius possunt habere duo essonia ante apparenciam et post apparenciam si voluerint. Et si aliquis attachiatus sit per bona sua alicui respondendi in aliquo placito non debet currere in defaultam nisi fuerit in villa quando bona sua fuerint attachiata, set bona sua retenta erunt quousque venerit vel racionabiliter premuniri poterit ad veniendum et ad respondendum parti. Et post diem datum ad veniendum et non venit tunc potest procedere ad defaultam de die in diem et distringere per dicta catalla et per alia catalla si inventa fuerint quousque venerit. Et si sit premunitus in forma predicta et non venerit infra annum et diem tunc debet ballivus appreciare vel vendere dicta bona et dare parti pro debito suo vel convencione fracta vel transgressione sibi facta vel consimilibus per visum hominum, et residuum bonorum suorum tenere et custodire ad opus suum quousque venerit salvo domino amerciamentis suis. Similiter si venerit et sit attinctus in curia et bona sua comorantur in manu ballivi per unam quindenam post placitum terminatum tunc debet ballivus preciare et vendere in forma predicta et dare parti tantum quod recuperavit vel dicta bona in precio salvo semper domino amerciamentis suis. Et etiam si aliqua bona sint attachiata que non sunt tenenda post attachiata appreciantur et manifeste ponantur ad vendicionem, et denarii sic recepti debent commorare in manu ballivi per unam quindenam in forma predicta, et post quindenam elapsam quod denarii tradantur querenti in forma predicta. Et si deffendens inveniat plegeos parti respondendi tunc sint bona appreciata et liberata plegiis, ita scilicet quod si deffendens sit attinctus vel convictus de aliquo quod plegii respondeant de dictis bonis vel de precio et quod ballivus teneat bona vel precium in forma predicta de plegiis. Et si deffendens inveniat plegeos de dictis bonis et postea non vult ad dictam curiam venire, sint dicti plegii districti de curia in curiam ad habendum deffendentem ad curiam, et quod respondeant de illo quo¹ manu ceperunt vel de precio. Et si deffendens vadeat legem suam potest facere eam cum sua sexta manu. Et si placitat ad inquisitionem capta erit de mercatoribus forinsecorum et intrinsecorum tunc in villa existencium.² Et nullus manens in Torkesay seu terras vel

¹ MS. "qui."² MS. "existene"

tenementa habens in Torkesay tenetur venire ad dictam curiam de pepouderous nec debet placitari nec amerciari in dicta curia nisi voluerint de bona voluntate sua, set attamen [non] possunt placitare¹ in dicta curia nisi in forma subscripta.

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¹ MS. "placitar'."

THE ANTI-DUMPING FEATURE OF THE CANADIAN TARIFF.

ONE of the most effective popular arguments in favor of the maintenance of a strongly protective tariff is that founded upon the alleged "dumping" upon one's country of foreign goods at abnormally low rates. To this process are apt to be attached, by the beneficiaries of high tariffs and their popular attorneys, suggestions of sinister motives uniquely characteristic of foreigners. Such well-worn diplomacy has even yet a high economic value, for the majority of the public still respond to the primitive instinct which requires no argument for the identification of foreigner and enemy. And, since human prejudice furnishes as real and effective a series of economic facts as physical nature or rational intelligence, it must be counted upon in any adequate treatment of economic subjects.

Now the process named "dumping," which normally signifies the selling of goods below cost, or at least below a reasonable profit, is undoubtedly a frequent economic fact. But it is a phenomenon which is vastly more common within countries than between them. It is the familiar accompaniment of overproduction, of surplus stocks, forced or bankrupt sales, change of fashion, and a score of other circumstances which have the general effect of rendering goods unsaleable at a profit. It is frequently met with in the course of sharp competition, whether of a temporary nature or to the point of extinction of one or more competitors. In many cases this is doubtless but an anticipation of inevitable sacrifices due to existing economic conditions. But it may be the result of the deliberate efforts of new-comers to force their way into an eco-

conomic field or of established interests to enlarge their operations. Where a fall in prices is due to the introduction of new and more efficient processes, the business of rivals, whether within or without a country, may be rendered unprofitable without their being the victims of any dumping practices. The lowered market price, though abolishing profits under the older system, may yet afford ample returns for those employing the newer methods. These phenomena are thus familiar in every progressive country. Yet it is practically only the international aspect of them which is presented under the term "dumping," and almost the whole of the argument on the subject proceeds upon the assumption that the evils of dumping and the remedies to be sought are confined to international trade.

International dumping, however, though but a phase of a general process, is a real factor, so far as it goes, and must be dealt with in connection with those other factors, such as rival interests and international prejudice, which are no less real, as the politicians of a democracy well know. Now Canada is a very normal form of democracy. The manufacturing interests may be still small, in point of numbers, but they include an increasing proportion of the ability and intelligence of the country. As a result, Canadian industries are being rapidly developed. They exhibit increasing enterprise and efficiency of organization, as shown in the tendency, in the great staples of trade, to replace the numerous small, ill-furnished, and wasteful concerns which marked the régime of random competition by fewer well-equipped and well-managed corporations. With an expanding market within the country, and as yet but little pressure from without, the manufacturers are naturally the most prosperous class in the community.

The political party at present in power in Canada has

free-trade traditions, and originally stood for a revenue tariff only. But with the development of the political influence of the manufacturers the party leaders have found it expedient to virtually accept the principle of protection. Still, partly to save its face and partly with an eye to the agricultural vote, the government is loath to concede the larger demands of the manufacturers. By its anti-dumping device it has been able to meet their most effective arguments without increasing the tariff.

It is obvious that, if the practice of dumping became an important factor in the import trade of a country like Canada, it would be likely to have an injurious effect upon some of the most natural and legitimate industries of the country. It is true that, if the dumping process were regular and continuous, it would simply be equivalent to the supply of certain products from abroad more cheaply than they could be produced at home,—a familiar and profitable factor in international trade. But, if the supply of exceptionally cheap goods be temporary and irregular, though of sufficient importance to really destroy or at least seriously cripple legitimate native industry, the importing country may experience corresponding periods of exceptionally dear goods. It might find in the end that it paid more for its imports than had they been produced within the country under a moderate tariff protection.

It is true that hitherto there have been comparatively few cases of permanent injury, owing to the international aspect of the dumping process. But even a very few authentic cases will go a long way in a specious argument favored by popular prejudice. As a result, the Herodian device for securing the extinction of a possible rival is apt to be advocated as a fiscal safeguard against the possible importation of unduly cheap goods. If, then, a fiscal device could be arranged, whereby protection against dumping could be secured in whatever lines it might be desirable

to prevent it and for whatever period it might be practised, but which would not affect any importations of goods at normal prices, the advocates of an abnormal tariff would be deprived of their most effective argument. And if this could be accomplished in such a way that the sacrifices which the foreigner is willing to make need not be lost to the importing country, but might be converted to the benefit of the national treasury, the arrangement might be well-nigh ideal.

Such a device, it may reasonably be claimed, has been discovered and put into practice by the Canadian government. Moreover, it is as simple as it is effective. In essence it is merely this: wherever a foreigner sells goods to a Canadian importer at a lower rate than the normal market price in his own country, then in the first place, in accordance with ordinary fiscal practice, the regular duty shall be levied, not upon the invoice price, but upon the normal selling price in the country of export; and, in addition, the customs officials shall collect, as special duty, the difference between the sacrifice or dumping price and the normal price of the goods in the country of export. As a result, the goods, at whatever price sold to the Canadian importer, shall be paid for by him on the basis of the normal price in the country of export plus the regular duty on that price. But the Canadian treasury shall receive the benefit of the dumper's sacrifice.

Though this is substantially the essence of the device, there are a few modifying features observed in practice. In the first place there is a limitation on the amount of the dumping discount to be paid to the government. It is provided that the amount of the special duty shall not exceed one-half the regular duty on any imports. Thus, if an article whose normal price in the country of export is one dollar and on which the duty is 40 per cent. be sold to a Canadian importer at seventy-five cents, the

regular duty of 40 per cent. will be collected on a valuation of one dollar, but the special duty shall be not twenty-five cents, but twenty cents, being one-half the regular duty on the article. As, however, the dumping discounts seldom exceed one-half the regular duty, the government almost invariably secures the difference between the regular and sacrifice prices. In consequence of this fiscal expedient the Canadian manufacturer may normally rely upon having his market protected for him to the full extent of the regular tariff. At the same time he is deprived of all excuse for claiming that the general tariff should be raised to such a height as will protect him from the mere possibility of abnormally low prices for foreign imports.

The clause of the act which embodies the anti-dumping feature of the Canadian tariff is as follows:—

Whenever it appears to the satisfaction of the Minister of Customs or of any officer of customs authorized to collect customs duties that the export price or the actual selling price to the importer in Canada of any imported dutiable article, of a class or kind made or produced in Canada, is less than the fair market value thereof, as determined according to the basis of value for duty provided in the customs act in respect of imported goods subject to an *ad valorem* duty, such article shall, in addition to the duty otherwise established, be subject to a special duty of customs equal to the difference between such fair market value and such selling price: provided, however, that the special customs duty on any article shall not exceed one-half of the customs duty otherwise established in respect of the article, except in regard to the articles mentioned in items 224, 226, 228, and 231 in Schedule A to The Customs Tariff, 1897, the special duty of customs on which shall not exceed 15 per cent. *ad valorem*, nor more than the difference between the selling price and the fair market value of the article.

The items referred to by number in this clause include pig and scrap iron, iron and steel ingots less finished than bars but more advanced than pig iron, rolled iron or steel

angles, girders for bridge or structural purposes, and large rolled iron or steel plates.

In carrying out this new feature of the tariff, the former regulations designed to prevent the undervaluation of imports are still retained. In addition the government requires that invoices shall be supplied in duplicate, each invoice giving in one column the price at which the goods are sold to the Canadian importer, and in another the fair market value of such goods when sold for home consumption in the country of export. One of these invoices is retained at the local customs house, and the other forwarded to the Customs Department at Ottawa, which is thus enabled to keep a check upon the values given in the invoices received in all parts of the country.

In order the better to enforce the old and the new regulations, the Customs Department employs agents in the chief centres of export to Canada, whose duty it is to keep the department informed as to the fair market values of the lines of goods commonly shipped to Canada. The agents, as a rule, once their function is fully realized, find little difficulty in securing the necessary information, usually obtaining it from an inspection of the books of regular exporters to Canada. On the one hand, the regular exporter naturally finds it no advantage to his business to deny the information required. On the other hand, an exporter with a well-established trade in Canada is the least likely to engage in dumping, and will naturally welcome any arrangement which will protect his trade from temporary raids on the part of competitors in his own country who have no permanent interest in the Canadian trade. All information obtained in this way is treated as strictly confidential. Quite recently the government of Australia, on behalf of its Customs Department, applied to the Canadian government for information as to the values of goods produced in the United States. The Cana-

dian government, however, declined to comply with this request, on the ground that the information obtained by its agents was entirely confidential.

Inasmuch as the protective aspect of the tariff is intended entirely for the benefit of the manufacturing interests of the country, and inasmuch as free goods may be presumed to be either those which the manufacturers themselves have to purchase or those which are not produced within the country in any important measure, they are not subject to the special anti-dumping safeguards. There is one exception, however. Rolled wire rods, though free of ordinary duty, are subject to the anti-dumping regulations to the limit of 15 per cent. This will readily appear as a compromise between opposing manufacturing interests. On the other hand, in cases where articles, though subject to ordinary duty, are not made in Canada in any substantial quantities, the customs authorities may temporarily exempt them from the special duty. Goods on which the regular duty is 50 per cent. or upwards may also, at the discretion of the customs authorities, be exempted from the special or anti-dumping duty.

As indicated by these provisions, the administration of the anti-dumping feature of the tariff requires that a considerable range of discretion shall be given to the central customs board. Thus, to avoid vexatious exactions arising from slight variations of the markets, if the prices on an ordinary invoice do not vary more than 5 per cent. from the standard rates, no special duty is levied.

The attitude of the Canadian manufacturers towards this anti-dumping device is a very mixed one. In the case of those who are satisfied with a moderate protective tariff, provided only that they secure the protection which it promises on the face of it, the anti-dumping feature is commonly regarded with much favor. In the case, how-

ever, of those who are bent upon securing the highest possible protection which the people can be induced to yield, the device is not at all popular, as it deprives them of much the most effective argument in favor of an exceptionally high tariff. Again, most advocates of high protection favor specific rather than ad valorem duties. Specific duties usually disguise a high tariff. Moreover, the tendency of economic improvements is towards a lowering of prices; and ad valorem duties come down relatively with prices, whereas specific duties increase relatively with a fall in prices. The anti-dumping device, however, requires for its efficient operation the ad valorem system of duties. In most respects, therefore, this expedient is objectionable to the advocates of high protection. They are inclined to assert in round terms that in practice it is not really effective, though, when invited by the customs officials to give particulars, these are seldom forthcoming.

It is true that in the case of some goods quite outside the usual lines of import, or where it is difficult to fix upon the normal selling price, the exact enforcement of the special duty is somewhat difficult. But even in such cases the grosser forms of dumping are readily checked. In all the staple lines of industry, covering the great majority of Canadian imports, the anti-dumping clause as now enforced attains its object with remarkable efficiency. This is indeed the basis of the opposite line of complaint against it. Many importers complain that, owing to its very efficient enforcement, they are no longer able to take advantage of those special bargains which sometimes present themselves in the foreign countries whence they import. Not a few manufacturers, themselves anxious enough for protection on their finished goods, who yet use other dutiable goods as raw materials, complain of the anti-dumping regulation as having greatly curtailed their profits, and in

some cases threatened the existence of their business, since it has prevented them from taking advantage of special cuts in prices to lay in large stocks in their own lines of purchase. On the other hand, it has encouraged certain industries to locate in the country, because the assurance of being protected against goods being sold at a sacrifice is more important in the long run than the promise of an unusually high duty, which is very likely to induce over-competition within the tariff wall.

In conclusion, it may be observed that this anti-dumping device is quite as applicable in free trade as in protectionist countries. As applied in a free-trade country, it would not interfere with the import of goods sold at the same rates as in the country of export. It would, however, exact as duty the difference between the domestic price in the country of production and the sacrifice price at which they were sold to such a country as Great Britain. In this way, cases of real hardship from foreign competition which have been brought to light in Great Britain could be provided for without sacrificing the general interest of the country in freedom of trade. The sale of goods below cost is certainly abnormal trade, and cannot be ultimately to the benefit of any one, while neither skill, enterprise, nor efficiency can cope with it in competition. A fiscal device which is able to effectively deal with that situation without necessarily interfering with normal trade is worthy of consideration.

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THE AGRICULTURAL DEVELOPMENT OF THE WEST DURING THE CIVIL WAR.

ONE of the most remarkable features of the industrial and commercial conditions in the North during the Civil War was the steady growth of the agricultural States of the West. The passionate excitement of war and the deep interest in politics, which the present generation is wont to consider the only prominent characteristics of the time, after all, absorbed but a part of the country's attention. There was a peaceful expansion westward, an agricultural development in those States comparable to that of the previous decade, which added enormously to the nation's resources and contributed largely to the final success of the North. Without the war this development might, indeed, have been greater; but its extent, in spite of the war, was marvellous.

The leading agricultural States—Indiana, Illinois, Wisconsin, and Iowa—were in the midst of great development when the year 1861 opened. Notwithstanding the check caused by the panic of 1857, the advance of their farming interests in the previous decade had been conspicuous, their agricultural area having increased 80 per cent. and the value of their farms 270 per cent. (from \$277,000,000 to \$1,027,000,000). Their combined wheat crop rose from 21,000,000 bushels in 1849 to 63,000,000 bushels in 1859, that of corn from 120,000,000 bushels to 230,000,000 bushels, and that of oats from 20,000,000 to 38,000,000 bushels. This growth, more rapid than agricultural growth had ever been in any other section of the North, was in strong contrast to the gradually decreasing crops of the East.

During the years of fighting there was continued advance. Large crops in 1860 and 1861 were succeeded in 1862 by

the largest crops in the history of the country up to that time, when in the four States under consideration the wheat crop of 83,000,000 bushels was $33\frac{1}{2}$ per cent. more than in 1859, that of corn 290,000,000 bushels, 25 per cent. more than in 1859, that of oats 43,000,000 bushels, an advance of 15 per cent. With the exception of the corn crop of 1863, which was damaged by frosts, and the wheat crop of 1864, these figures were maintained, and in some respects surpassed, in 1863, 1864, and 1865. The same is true also for the North as a whole, according to the estimates of the Department of Agriculture.¹

In no way, perhaps, is the steady progress better illustrated than by the grain shipments from the city of Chicago. The record of this city is marvellous. Starting in 1838 with a shipment of 78 bushels of wheat, and each year thereafter increasing her shipments, but never before 1860 sending out over 10,000,000 bushels of wheat and wheat flour, this new city for each year of the war shipped, on the average, 20,000,000 bushels of wheat and wheat flour. Her yearly corn exports, before 1860 never above 11,000,000 bushels, averaged during the war 25,000,000 bushels. Of all kinds of grain her shipments in 1860 were the largest to that date,—31,000,000 bushels. But in 1861 these mounted up to 50,000,000 bushels, to 56,000,000 bushels in 1862, 54,000,000 bushels in 1863, 46,000,000 bushels in 1864, and 52,000,000 bushels in 1865. So it was also for Milwaukee, Detroit, Toledo, and other lake ports, and for Cincinnati,

¹ For elaborate statistics of the crops see the Annual Report of the New York Chamber of Commerce for 1873-74, pp. 326-345. For the whole country the crops were (in million bushels):—

	<i>Wheat.</i>	<i>Corn.</i>
1839	84.8	377.5
1849	100.2	591.6
1859	170.2	827.1
1862	186.8	564.6
1863	190.9	451.1
1864	160.7	530.4
1865	148.5	704.4

The Confederate States produced in 1859 31,000,000 bushels of wheat, 280,000,000 bushels of corn; hence the decline in the total corn crop recorded in 1862.

though with no such phenomenal advances.¹ The commerce of the Great Lakes, by which route over 90 per cent. of this grain was transported to Buffalo and other Eastern lake ports, was also very large, nearly twice as large as before 1861, while the grain receipts of Buffalo and New York and the business of the New York railroads and canals showed equal progress.

The lake ports, especially Chicago, were undoubtedly profiting by the closing of the Mississippi River to New Orleans, for they gained most of the shipments from the interior which usually went to the Southern port, so that the increased shipments of Northern cities and the increased traffic of the Northern transportation routes do not exactly measure the growth of the crops. From 1850 to 1860 New Orleans received on the average approximately 10,000,000 bushels of grain each year.² If we say that all of this trade was diverted to the one city of Chicago,—an unreasonable assumption,—we see that it constituted only from one-third to one-half of the increase of Chicago's trade. The opening of the river in 1863 had no appreciable effect in starting traffic again southward, because marauders on both banks continued to make the route unsafe, and because the Westerners had come to appreciate the speed and directness of the Northern routes.

It was a striking coincidence that the greater harvests and the loss of the river route southward were so fully anti-

¹The figures given are from the Report of the Chicago Board of Trade for 1888, p. 86. (A barrel of flour equals four and one-half bushels of wheat.) In 1862 Milwaukee exported 15,000,000 bushels of wheat, three times as much as in any year before the war; so also for flour. (*Hunt's Merchant's Magazine*, June, 1867.) Cincinnati in both 1862 and 1863 shipped 1,000,000 bushels of wheat, 75 per cent. more than in any year since 1857. (See Annual Review of the Commerce of Cincinnati for 1870, p. 113.) Before 1860 Buffalo had never received over 26,000,000 bushels of grain, including flour. In 1862 she received 72,000,000 bushels. (See Board of Trade Statement of the Trade and Commerce of Buffalo for 1865, pp. 27, 28.) The Erie and Champlain Canals delivered at tide-water in 1862 32,000,000 bushels of wheat, almost three times more than ever before in any single year. (Annual Report of New York Produce Exchange for 1872-73, p. 285.)

²One-fourth of this was shipped to foreign ports. For the yearly imports at New Orleans from the interior see the Board of Trade Annual Statement of the Trade and Commerce of Buffalo for 1865, pp. 26, 27.

pated by the railroad construction of the previous decade. In 1850 Indiana had 225 miles of railroads, Illinois 110 miles, Wisconsin 20 miles, and Iowa none. In 1860 the four States together had over 6,990 miles of road ready to accomplish the heavy tasks to be imposed upon them. Whatever might be the increase of the crops, although the river was closed, there were ample facilities to take them to market. Seven new trunk lines from the South, West, and North centred in Chicago, whence three other trunk lines and the lakes led eastward. This city, which in 1850 celebrated the arrival of its first train, was entered during the last part of the war by ninety trains daily. Better preparation in these sections for the strain of war could hardly have been devised.

At the beginning of the war many feared molestation of the crops; but, when with each succeeding year plenty filled the land, boastings and congratulations were universal. That we were a great agricultural nation in a time of war few public teachers, speakers, or newspapers, allowed the people to forget. It was fortunate that the source of our food supply was within our own borders, and not in the Confederacy, and that it was never included within the theatre of war. With food plenty, the doubts and fears that so easily lend themselves to discontent in a time of public crisis had little place.

Another effect of the abundant food supply, which has never yet been adequately set forth, but which, nevertheless, was very important, was its influence on foreign countries. We were a granary for Great Britain, and to a small extent for the Continent, from which countries the Confederate States were endeavoring to win recognition by pointing with pride to the fact that they were the largest source of the world's cotton supply. From 1850 to 1860 the production of American cotton had increased 120 per cent.,—from 2,450,000 bales to not quite 5,400,000 bales,—that of wheat by less than 75 per cent.,—i.e., from 100,000,000 bushels to 170,000,000 bushels. Furthermore, while

the export of wheat was practically stationary in the period, that of cotton rapidly increased.¹ The cotton-consuming countries of the world were so far dependent on the Southern staple that over 80 per cent. of the cotton consumed in Great Britain from 1851 to 1860 came from the United States; in 1860, 75 per cent. of that consumed on the Continent also came from America. But in the same period the dependence on American grain was very much less, since we shipped almost none at all to the Continent, and in almost every year were outstripped by Russia in shipments to Great Britain.

What would be the effects of the war on these relations at once became a leading question in Europe, and it was generally assumed that there would be a great decrease in the receipts of both American staples, of grain as well as of cotton.

With the declaration of the blockade of the Southern ports by the United States one part of the expectation was fulfilled. The foreign factories could get little or no American cotton, and began to shut down or run but part time. The 2,580,700 bales received in Great Britain from America in 1860 fell to 1,841,600 bales in 1861, 72,000 bales in 1862, 132,000 bales in 1863, 198,000 bales in 1864, and 462,000 bales in 1865; but, on account of the enlarged importations from other fields,—Brazil, Egypt, West India, East India, China, Japan, Turkey, and Asia Minor,—the yearly consumption did not fall off as much as did the American imports. The familiar story of the distress among the unemployed British operatives need not here be retold. In the consumption of cotton on the Continent, France took the lead, consuming about one-quarter as much as Great Britain. Germany was second, with Russia, Holland, Spain,

¹ In 1850 we exported 635,381,604 pounds of cotton; in 1860, 1,767,686,338 pounds, the increase being gradual. (Ninth Annual Report of the Boston Board of Trade, p. 91.) The largest exportation of wheat and wheat flour, 1850-60, was, in 1857, 31,000,000 bushels. The average for the decade was about 20,000,000 bushels a year. In 1860 it was 16,000,000 bushels. (Report on the Internal Commerce of the United States, 1879, p. 116.)

and the other minor countries and ports following.¹ In 1860, as has just been stated, three-fourths of this cotton came from America, to disappear practically with the opening of the war; but here again, as in the case of Great Britain, on account of increased importations from other countries, the yearly consumption did not fall off equally with the American importations. Roughly speaking, the different Continental countries succeeded throughout the war in getting for use 50 per cent. of the usual amount. There was distress among the French operatives, as in England, but not to so great an extent.

Great Britain's wheat crop (exclusive of the crop of the islands of the British Seas), which in 1858 and 1859 averaged 16,000,000 quarters annually, in 1860 fell to 13,135,124 quarters, in 1861 to 11,078,948 quarters, in 1862 to 12,271,546 quarters, in 1863 to 13,957,554 quarters. In 1864 it rose to 17,922,048 quarters.² The average yearly price per quarter in 1860, 1861, and 1862 rose to 53s. 3d., 55s. 4d., and 55s. 5d., respectively, but in 1863 fell to 44s. 9d. and in 1864 to 40s. 5d.³ For three successive years the country's grain crops were failures, and she was forced to import twice as much grain as usual. In the emergency it was the United States, at war, that supplied the new demand,—the same United States that had cut off the cotton.

¹ There were 33,000,000 cotton spindles in Great Britain, 12,000,000 on the Continent, and 5,000,000 in the United States. Great Britain in 1860 consumed 2,633,000 bales; France, 621,000 bales; Germany, 307,000 bales; Russia and minor ports, 324,000 bales; Holland, 117,000 bales; Spain, 106,000 bales. (Report of the United States Revenue Commission, 1865-66, pp. 131, 134.)

² See Report of the New York Produce Exchange, 1875-76, p. 324. From 1856 to 1859 the total imports of wheat into the United Kingdom averaged 16,000,000 cwt.; in 1860 they were 25,000,000 cwt.: in 1861, 29,000,000 cwt. in 1862, 41,000,000 cwt.; in 1863, 24,000,000 cwt.; in 1864, 23,000,000 cwt. In these years the imports of American wheat were, respectively (in cwt.), 6,497,335, 10,866,891, 16,140,670, 8,704,401, and 7,895,015. Those who attribute our increased exports solely to the fact that the price of wheat here did not rise as fast as that of gold, and that, therefore, it was cheaper to buy grain with which to pay our English debts than it was to pay them in gold, overlook the failure of the English and Continental crops. The commercial column of the *Chicago Tribune* for 1861 and 1862 contains frequent extracts from the London *Mark Lane Express*, the leading English agricultural paper, upon the condition of the English and Continental crops.

³ See Report of New York Produce Exchange, 1876-77, p. 320.

Great Britain was astonished. In 1861, the year when American cotton ceased to arrive in Great Britain, the British imports of American wheat and wheat flour were 36,000,000 bushels, three times more than ever before; in 1862, 37,000,000 bushels. The lowest point during the war was in 1864,—20,000,000 bushels.¹ Russia and Germany were the other great granaries of Great Britain, but the shipments of wheat and wheat flour from the one country to Great Britain actually fell off in 1861, 1862, and 1863; while those of the other increased, and that but slightly, only in one year,—1862.²

French importations to Great Britain in wheat and wheat flour, usually ranking next after those from Germany and Russia, in the first three years of the war fell off enormously, being only 25 per cent. of what they were in 1860, for the sufficient reason that France also, along with Great Britain and all of Southern Europe, suffered crop reverses in 1861. The French crop in this year was 25,765,000 quarters, as compared with an average yearly crop of 32,000,000 quarters in 1858, 1859, and 1860. Importations, which in 1858, 1859, and 1860 had averaged about 400,000 quarters, suddenly rose to almost 5,400,000 quarters in 1861.³ Of these increased importations from one-third to one-half came from the United States. The American shipments to France before 1861 were practically nothing; but in the year following the poor harvests they were 10,000,000 bushels of wheat and wheat flour, 5,000,000 bushels the next year.⁴

Our Northern press and the public watched with keen interest these foreign shipments of grain. They noted that,

¹ The Report of the New York Chamber of Commerce, 1864-65, p. 101, gives a full table of exports of breadstuffs from the United States to Great Britain and Ireland from 1847 to 1866.

² See Report of New York Produce Exchange for 1878, p. 327.

³ Prices per quarter were as follows: 1858, 38s.; 1859, 38s. 9d.; 1860, 35s. 7d.; 1861, 42s. 2d.; 1862, 40s. 5d.; 1863, 34s. 4d.; 1864, 30s. 6d.; 1865, 28s. 8d. See Report of New York Produce Exchange for 1875-76, p. 336.

⁴ See Report on Internal Commerce of the United States, 1879, p. 243, Appendix.

when the British and Continental crops were poor, our own chanced to be unprecedentedly abundant; and they universally believed that these shipments played a large part in preventing foreign recognition of the Confederacy. The reasoning was most frequently applied to Great Britain, inasmuch as Americans in general were well acquainted with the situation there. American grain was more important to the British than American cotton, reasoned the Northerners. If Great Britain attempted to secure more of the latter by breaking the blockade, her receipts of the former would be materially lessened by the resulting war with the United States. This deficiency other nations were not in a position to make up any more quickly than that in cotton; and the resulting very high prices of food, going far beyond the prevailing high prices of 1862, and involving the whole kingdom, would be far more serious than a partial loss of work in a single district. Our large American harvests, therefore, were peculiarly fortunate, for, in addition to supplying our wants at home, they affected powerfully our international relations.¹

The same considerations apply to our relations with France, though not so forcibly. The French crops, in the first place, were poor but in a single year, not, as in Great Britain, for three years. The French importations were not nearly so large as the British, and prices in France did not go so high. Moreover, the cotton industry in France, one-quarter as large as in Great Britain, occupied a comparatively small position in the nation. But, in this connection, we must not consider France by herself: she was a member of a combination, more or less strong, desirous of recognizing the Confederacy; and this combination, as a whole, could not dispense with American grain.

The shipments abroad had a pronounced reaction, also, on this country; for in the early part of the war, when we were producing more than was necessary for our own wants,

¹ Rhodes, in his elaborate discussion of the recognition question, does not mention the American grain imports into Great Britain, although the matter was so fundamental, and was prominently recognized as such in the newspapers of the time.

and when, therefore, our home markets would naturally have been overstocked and prices for the farmers very low, the strong foreign demand tended to remove the surplus, and prevent that disappointing result.

The other leading activities of the Western farmers—hog, cattle, and sheep raising—were also flourishing. According to the Cincinnati *Price Current*, the number of hogs packed in all the West, which never before the war had been above 2,500,000, in 1862-63 rose to 4,000,000, and in 1863-64 was 3,000,000. This increase was represented most graphically by the record of Chicago, where the number jumped from 151,339 in 1859-60 to 970,264 in 1863-64, and to a less degree by that of Cincinnati, St. Louis, and other cities. In 1862 Chicago outstripped Cincinnati, and wrested from her the title "Porkopolis of the West." Most of the packing was done in the cities, where the industry was fast becoming centralized, but a part of it was still done in the small towns and in the country. Despite the progress of packing, however, we are informed by the statisticians of the time that the number of hogs raised each year was no greater than in 1860.¹ The change is to be explained rather by the fact that the farmers sent to the market more of their stock than usual. Cattle raising was normal, and cattle packing was in its infancy.

In the nation at large the progress of sheep raising was most remarkable, inasmuch as wool was the most important substitute for cotton. The production of wool increased gradually from 1860, when it amounted to 60,000,000 pounds, to 1865, when the total production was 140,000,000 pounds; while in the latter year there were 32,000,000 sheep in the North, double the number of 1860. The Western States shared the progress along with all the North. Illinois, the leading agricultural State, in four years more than trebled her number of sheep. Ohio, the leading wool State, doubled hers. "No branch of business increased

¹ The Report of the New York Produce Exchange for 1873-74 and the Report of the Commissioner of Agriculture for 1865 give full statistics for hog and cattle raising during the war.

more rapidly than the domestic wool trade":¹ it grew with "gigantic strides." Everywhere the wool-growers were very energetic. Their conventions, new associations, and jealous rivalry with the wool manufacturers over the tariff are characteristic features of the times. In 1865 the National Wool-growers' Association was formed.²

So far as crops and herds and flocks are concerned, the evidences of great material prosperity in the West are unmistakable. There was unusual activity in all branches of agriculture, and, on the whole, unusually large crops and large herds and flocks. Other factors, such as prices and freight rates, the growing use of agricultural machinery, the prosperity of agricultural fairs, increase in population, the occupation of new lands, and public agitation in favor

¹ From the *Boston Shipping List*, January 4, 1865. The *Statistical Abstract of the United States*, 1902, p. 350, gives full statistics for the growth in the production and importation of wool. Ohio in 1854 had 4,845,189 sheep, 3,368,174 in 1860, 6,306,796 in 1864. The number of sheep in Pennsylvania, 1850-60, fell off 12 per cent.: from 1860 to 1864 it increased 76 per cent. In Illinois, 1850-60, it fell off 14 per cent.: from 1861 to 1864 there was an increase of almost 300 per cent. See Report of the Ohio Commissioner of Statistics for 1865, p. 23, and also An Address before the National Association of Wool Manufacturers at the first Annual Meeting in Philadelphia, September 6, 1865, by John L. Hayes, Secretary.

² Indiana and Illinois attempted to raise cotton in their borders, despite the Northern frosts. Much publicity was given to these trials, and scant success was magnified into large achievement; but practically nothing was accomplished.

In all the Western States the cultivation of sorghum, the Chinese sugar cane, introduced before 1860, was greatly extended, with a view to securing a successful substitute for the sugar made in Louisiana, upon which they had been dependent up to the opening of the war, for regularly one-half of the Southern sugar had been consumed there. For example, in 1852 the sugar crop of Louisiana was 321,931 hogsheads, of which 206,000 hogsheads were exported to the Western States. In 1858 the total crop was 362,296 hogsheads, of which the Western States received 187,339 hogsheads. (See *Hunt's Merchants' Magazine*, February, 1860.) The conventions of the sorghum-growers rivalled those of the wool-growers in number and popular interest; but, despite the most persistent experiments, the new cane produced only syrup, no sugar at all. Ohio and other States attempted to introduce sugar beets as a new source of sugar, the Ohio Board of Agriculture even going so far as to offer a prize of \$5,000 for the successful production of the beet sugar. All the attempts failed. By 1864 in the West sugar was a luxury. Both in the East and in the West prices were high. In Cincinnati the average price per pound, which in 1860 and 1861 was \$0.06, became \$0.20 in 1864 and 1865. Molasses in the same period rose from \$0.33½ per gallon to \$1.35,—for many people prohibitive prices, as we may see from the decline in the general consumption of sugar per capita from 30½ pounds in 1860 to 17 and 18 pounds in 1863-1864. In 1861 the consumption of cane sugar in the United States, excluding the Pacific coast, was 296,950 tons of foreign sugar and 118,331 tons of domestic sugar: in 1865 the figures were 345,809 tons of foreign sugar and 5,000 tons of domestic sugar. (See the Report of the New York Chamber of Commerce for 1862-63 and for 1865-66.)

of increased transportation facilities furnished testimony to the same effect. But in the very beginning of the war two contrary factors were very strong, the crash of the wildcat banks and high freight rates.

Many banks in Illinois, Wisconsin, and Indiana had, as the only security of their circulating notes, the bonds of the border and slave States. These bonds secession sent on a wild career of decline, which grew worse and worse after the opening of actual hostilities. Deprived in this way of the means of redeeming their notes, many of the Western banks, especially the small ones in the country, closed their doors; and the bonds were sold at auction for the benefit of the note-holders. If we say that, on the average, these were sold for eighty cents on the dollar, which is a high estimate, the loss to the people of Illinois, where the bank-note circulation was \$12,000,000, was over \$2,000,000. Eighty-nine of the 110 banks of the State were ruined; 39 in Wisconsin, 27 in Indiana. These failures of the small country banks fell heavily on the farmers.

The losses occasioned by high freight rates were just as widespread as those due to poor banking. The enormous grain shipments of 1861, accompanied by the closing of so many routes seaward,—the Mississippi River, the Baltimore & Ohio Railroad, and, with the coming of the winter, the Great Lakes,—found the railroads and other transportation lines unprepared. They were new, and had never handled heavy traffic. Much freight had to be turned away, and freight rates went up with a bound. The aggregate freight rate from Chicago to New York via Buffalo, by lake and canal, for a bushel of wheat rose suddenly from \$0.1725 in July until it reached \$0.3894 in October of the same year,—over 100 per cent. increase, whereas in the corresponding three months of 1860 the customary rise in the autumn had been but a little over 66½ per cent. The West was frantic, but helpless before the transportation lines; for, while the freight rates advanced so very fast, the price of spring wheat in New York in the same time—July to October—went only from 72 cents to \$1.15,—50 per cent. in-

crease in the wholesale price paid to farmers, to be set over against the 100 per cent. increase in freight rates. Press and public and State legislatures were loud in complaint. Large crops were of no avail to farmers. if transportation lines took all the profits.

The sequel is important. In October, 1864, after the depreciation of paper money had been constantly raising prices in general for almost three years, the freight on a bushel of wheat Chicago to New York by Buffalo, via lake and canal, was only \$0.27, almost \$0.12 less than in October, 1861, and in not a single month from 1861 to 1864 was the figure of October, 1861, again reached. On the other hand, the price of a bushel of spring wheat in New York in the same interval, October, 1861, to October, 1864, jumped from \$1.15 to \$2.35 in July, 1864, \$1.85 in October, and \$2.28 in January, 1865. Similarly, between the same two points over the same route, the freight on a bushel of corn increased, July to October, 1861, from \$0.1581 to \$0.3563; while the price per bushel of corn in New York advanced only from \$0.46 to \$0.54. But in October, 1864, the same freight was \$0.2381, while the price per bushel was \$1.56 July, 1864, \$1.58 in October, \$1.86 in January, 1865. Again, in the fall of 1861 the highest price paid for a live-stock car, Chicago to Buffalo, was \$95; in the fall of 1864 only \$130 for the largest cars, \$105 for smaller ones. But the price of live cattle in the latter year was 100 per cent. more than in 1861, and of live hogs 200 per cent. more. Thus we arrive at a most interesting and important result: the prices of agricultural products in 1864 and the first part of 1865 were 100 per cent. to 200 per cent. more than in 1861, while freight rates for grain were less than in 1861, and those for live stock advanced but slightly. This rise in farm products was greater, and lasted much longer, than the rise in freight rates. Never had the products of the farm so great a cash value. For their crops the farmers were getting not only the increased nominal value which an inflated currency produced, but in addition the part of this increase, and more, which naturally would have been added to the freight rates.

This remarkable result, following two good years in 1862 and 1863, was rich recompense for the losses of agriculture in 1861, and a cause of great buoyancy and prosperity.¹ The amount of debts and farm mortgages paid off during the war was vast.²

The use of labor-saving machinery on the farms had already begun when the war opened, but was largely extended during the struggle. Mowers and reapers were yet new: only on the largest farms of the West were they common. The wheat drill was not common in any section. As soon, however, as men began to go to war, the increasing use of new labor-saving machinery was as striking a feature of farming as were the large harvests. The new devices were necessary to make up for the scarcity of laborers. But for them, so we are assured from many sources, a large part of the crops could not have been gathered.³ In 1864 over 70,000 mowers and reapers were manufactured, twice as many as in 1862, and many more than in any year before. The manufacturers could not supply the demand. But a small proportion of these were sold out of the United States.⁴

¹ Lest any think that, in the matter of freight rates, I have been deceived into accepting gold quotations in 1864 for quotations in paper, I would call attention to the fact that the rates for cattle cars are contemporary rates, taken from the successive reports of the Chicago Board of Trade. Such contemporary quotations were not in gold, but in paper. The grain rates were published in 1873, but are substantiated by the contemporary rates as given in the reports of the Chicago Board of Trade.

For the grain freight rates see the Reports of the New York Chamber of Commerce for 1872-73, p. 392; for the rates for live-stock cars see the Report of the Chicago Board of Trade for 1861, p. 57, and for 1864, p. 68. For the prices of wheat, corn, cattle, and hogs see the Aldrich Report of 1893. I have been unable to find the quotations for hogs and cattle in Buffalo. The relative advance is shown by the prices in other cities. Beeves, good to prime, live weight, in New York rose from \$4.90 for 100 pounds in October, 1861, to \$11.76 in April, 1865; hogs, good to prime, light weight, in New York rose from \$3.75 and \$4.12½ in October, 1861, to \$13 and \$14.50 in January, 1865.

² *Recent Financial, Industrial, and Commercial Experiences of the United States*, by David A. Wells, New York, 1872, p. 25.

³ See Report of Ohio Commissioner of Statistics for 1865, p. 9; *Scientific American*, July 4, 1863.

⁴ The *Genesee Farmer*, June, 1864, gave a list of over 190 companies making agricultural machines,—75 in New York State, 25 in Illinois, 25 in Ohio, 25 in Pennsylvania, and many scattering. For the extent of these manufactories see *Scientific American*, February 13, 1864; *Country Gentleman*, May 19, 1864; *Rail-road Record*, May 11, 1865. See also the introduction to the volume on Agriculture

The horse-rake was likewise recognized as an efficient labor-saving device, and its use was rapidly extended. Many new harrows, grain drills, corn planters, and steam threshers were put on the market. At the agricultural fairs, both State and county, which, with some diminution in 1861, were held throughout the war, attended by the usual crowds, and meeting with the usual successes and failures, the exhibitions of the new machinery afforded the chief attraction, and aroused the greatest possible interest. Only one exhibit compared with them in popularity,—another comparatively new labor-saving device,—the sewing machine.¹

There was definite increase of population in all the agricultural States, as shown by the census and by the school statistics. Illinois, by the United States census in 1860, contained 1,711,915 people, in 1865, by the State census, 2,141,510,—a gain of 430,000.² The number of scholars of school age rose from 472,000 to 580,000, the number of teachers increased by 2,500.³ Wisconsin in the five years

in United States Census of 1860. The value of the exports of agricultural implements, all kinds, and not only mowers and reapers, was as follows: \$611,162 in 1863-64, \$1,385,274 in 1864-65, \$1,373,004 in 1865-66, \$936,210 in 1866-67. (From tables in Commerce and Navigation of the United States for the various years.) The *Scientific American*, February 13, 1864, states that at that time the average price of mowers and reapers was \$130. This would be \$9,100,000 for 70,000 machines. The exports of all kind of machinery in 1863-64 and 1864-65 were worth but \$1,000,000, average of two years. The mowers and reapers exported must have been but a part of this. I have drawn on the files of the *American Agriculturist*, *Ohio Farmer*, *Country Gentleman*, and *Genesee Farmer*.

¹ The State fairs, also, after 1861 were maintained as usual. I have in my possession a mass of material to show the continuation of the fairs, both county and State. The files of the *Springfield Republican*, *New York Tribune*, and *Chicago Tribune* are valuable on this subject as well as the agricultural papers. In almost every account of the exhibits, mention is made of the interest in the agricultural machinery and sewing machines. The agricultural press was flourishing in the middle and the end of the war. By the end of 1864 the *American Agriculturist* had a circulation of 100,000,—an increase of 100 per cent. over 1861. See the *Ohio Farmer*, January 30, 1864, for the general prosperity of farmers' papers.

² Chicago's population increased from 109,260 in 1860 to 178,539 in 1865.

³ The growth of the schools was very marked, and a common cause of boasting. The figures given are from the reports of the State Superintendent of Education in the various States. The erection of new school buildings in Illinois was as follows, in 1859, 679 new buildings; 1860, 557; 1861, 382; 1862, 321; 1863, 349; 1864, 528; 1865, 510; 1866, 612,—thus practically normal activity in this respect in 1864 and 1865.

gained 90,000 population, 47,000 children of school age and 460 teachers. Minnesota, the newest State, gained 78,000 people, and showed an increase of 900 teachers. Iowa gained 180,000 people, Kansas 35,000, and Nebraska 30,000. Aside from natural increase, one source of the increase in population was foreign immigration, attracted partly through the active personal efforts of agents in Europe, sent out by States, railroads, and private individuals, partly through descriptive pamphlets, which were sent broadcast. From 1861 to 1865 some 45,000 immigrants, on landing in New York, continued their journey to Illinois, 23,000 to Wisconsin, 7,000 to Iowa, and 5,000 to Minnesota.¹ There were many refugees from the border and slave States, especially in Illinois. Although it is impossible to measure this movement, numerous references in the press and in the reports of railroad presidents leave no doubt that it was strong.² In 1863 it was reported that one-third of the land sales of the Illinois Central Railroad were to these Southern settlers.

Then there was immigration from other States, especially from the East, where there was a pronounced tendency towards depopulation of country districts and small towns. In New York State, out of a total of 948 cities and towns, there were 505 that decreased in population from 1860 to 1865, 463 of which had shown an increase in 1860 over 1855. In Massachusetts, out of a total of 385 cities and towns, 197 showed a decrease in 1865 over 1860, and 102 of these 197 had shown an increase in 1860 over 1855. The same conditions existed in Rhode Island.³ Some of this drift

¹ These figures have been compiled from tables given in the Annual Reports of the Commissioners of Emigration of the State of New York, 1861-65. The work of the Mormon missionaries was systematically carried on in Europe throughout the war; and the foreign immigration to Utah was quite strong,—1,941 in 1861; 3,418 in 1862; 3,561 in 1863; 1,694 in 1864; 1,092 in 1865.

² See Annual Reports of the President of the Illinois Central Railroad, 1861-65.

³ These figures have been compiled from the New York State Census for 1865 and from the Census of Massachusetts, 1895, vol. i. Most of the decadent towns were very small. Of the 505 in New York 393 were under 3,000, 112 between 3,000 and 10,000, and only 2 over 19,000. In Massachusetts 169 of the 197 decadent

of population away from these rural districts of the Eastern States was westward. The Secretary of State of the State of New York, impressed by the shifting population of that State, sent out circulars inquiring the probable causes of the changes; and in about 230 replies received we find that 65 towns attributed their loss to emigration, chiefly to the West.¹ Newspapers and railroad reports add their testimony to the same effect. St. Paul, Minnesota, a typical town of 13,000 in the growing sections of Minnesota, in the five years from 1861 to 1865 received 2,200 persons from other States.²

Another strong indication of the growth of population in the agricultural West was the constant occupation of new lands in every year of war. The Illinois Central Railroad, in the counties bordering along its lines, in 1860 sold 53,841.70 acres, in 1861 102,247 acres, in 1862 87,599 acres, in 1863 221,578 acres, in 1864 264,422 acres, in 1865 154,252 acres.³ These heavy sales were, moreover, not to speculators in large amounts, but to a large number of holders in small amounts. In 1862 and 1863 approximately 6,000 buyers, many of them from the Southern and border States, took an average of less than 60 acres each. During the whole war the counties along the line of the railroad grew in population 430,000. In other States—for example, in Minnesota—the railroads were actively disposing of their lands.

The State and government lands were also filling up. Wisconsin sold 340,000 acres of school lands, swamp lands,

towns were under 3,000, 28 between 3,000 and 10,000, and only 4 over 10,000. The Rhode Island Registrar's Reports for 1865 show that in that State 18 of the 31 towns decreased in population in 1865 as compared with 1860, of which only 7 decreased in 1860 as compared with 1850.

¹ See a small pamphlet entitled Preliminary Report on the Census of the State of New York for 1865. (Boston Public Library.)

² See McClung's St. Paul Directory and Statistical Record for 1866, St. Paul, 1866.

³ The figures are taken from the Annual Reports of the Illinois Central Railroad, Land Department. The *Railroad Journal*, each year, published abstracts of the annual reports of all the principal railroads.

and university lands, Minnesota 155,000 acres of school lands.¹ Under the Homestead Act, by the terms of which the general government gave away to actual settlers, not to speculators, for a nominal fee, farms of 160 acres each, 140,988 acres were taken up in the various States and Territories from January 1 to July 1, 1863, 1,261,592.61 acres from July 1, 1863, to July 1, 1864, and 1,160,532.32 acres from July 1, 1864, to July 1, 1865,—more than 21,600 farms occupied in two and a half years by permanent settlers. Of these homesteads 7,864 were in Minnesota, 2,211 in Wisconsin, 711 in Iowa, 1,755 in Nebraska, 3,115 in Michigan, 2,067 in Kansas, and a smaller number in several other States and Territories. The government disposed of much land in other ways. There were cash sales amounting to one-half of the homestead entries, large gifts to the veterans of the Revolutionary War, the War of 1812, and the Mexican War, and gifts to various railroads and to agricultural colleges.²

Two contrary movements, tending to reduce population in the West, must not be overlooked,—a further migration to the newly opened mines west of the Missouri River and the formation of armies. In every year of the war there was overland travel across the plains to Colorado, where gold was discovered in 1858, to Nevada, where silver was discovered in 1860, and to Idaho, where gold was discovered in 1863. The excitement in 1863 and 1864 in Iowa, Missouri, and Illinois, over the discoveries in Idaho may be taken as typical. Maps, suggested routes, and descriptive articles abounded in the newspapers of St. Louis, Chicago, and other cities; and, when the spring of 1864 opened, hundreds of prairie schooners started overland westward and scores of boats ascended the Missouri River. On a

¹ See the Annual Reports of the Commissioners of School and University Lands, Wisconsin, 1861-65; also the Report of the Auditor of the State of Minnesota for 1865. McClung's St. Paul Directory for 1866 shows that in 1861 326,749 acres of public lands were taken up in Minnesota in various ways, 109,526 acres in 1862, 303,669 acres in 1863, 676,284 acres in 1864, 794,425 acres in 1865.

² See the Annual Reports of the Commissioner of the General Land Office, 1861-65, for the government sales and gifts.

single day in the early summer 420 wagons were observed to cross the Missouri River at four different points in Nebraska. This represented 2,000 people. In a letter from Denver the readers of the *Boston Journal* were informed that 10,000 people were on the road between the Missouri River and Denver, all bound for Idaho. A certain judge, journeying from Fort Kearney to St. Joseph, declared that on no day was he out of sight of wagons, on one day he met 400 wagons.¹ It was certainly a strong movement, but there were special reasons for it aside from the gold fever: first, the disturbed conditions in Missouri, torn as the State was by the fierce struggles of radicals and conservatives, and harassed by bushwhackers; and, second, the approach of the draft. It is significant that the Governor of Iowa assumed by proclamation to prohibit any leaving that State until after the draft. The rush to Colorado and Nevada earlier was similar. In 1860, one year after the excitement in Colorado began, the census takers found 32,227 people in the Territory. Her estimated population in 1864 was 75,000. Nothing accurate measures the migration to Nevada, although it was roughly estimated that 30,000 went there in 1861. Thus through the war there was a continued migration away from the leading farming sections.

All the States and Territories we are considering furnished men for the armies. Up to December 1, 1864, Illinois raised 197,000 soldiers, Iowa 70,000 up to December 31, 1864, Wisconsin 75,000 up to December 31, 1864.

And yet, despite this drain of men, the West grew. Statistics of population, immigration, and the sale of new lands furnish a body of evidence that cannot be gainsaid. They show the arrival of new people, the making of new farms, a continued progress in Western agriculture while war was raging in the South. It was the new settlers, aided in part

¹ The shipping columns of the St. Louis papers are the basis of the statement as to steamers on the Missouri. For the overland movement see the *Chicago Tribune*, June 17, 1864; the *Boston Journal*, June 17, 1864; and the *Daily Missouri Republican*, June 10, 1864. The record of wagons across the river in Nebraska was: at Omaha, 156 wagons; Nebraska City, 131; Plattsmouth, 90; Brownville, 45,—422 in all.

by labor-saving machinery, who reaped the usual crops and the annual increase thereto, and clinched the prosperity of the West.

A further illustration of the growth of the West is to be seen in the sway of the Western markets over the rival commercial cities of the East. The chief aim of the seaboard cities, in their attempts to extend their trade, was to secure improved transportation facilities westward. New York, by the construction of the Atlantic & Great Western Railroad, secured new connections with the lake route at Cleveland, and also with Cincinnati and the Southwest. In a great ship canal convention, attended by two thousand people and presided over by the Vice-President of the United States, New York joined her interests with Chicago in memorializing Congress to improve, for military and commercial reasons, the Illinois and New York canals. This she was led to do by Chicago's threat to send her grain seaward over the Canadian and St. Lawrence route. Philadelphia completed a new railroad to Erie, to compete with the new Atlantic & Great Western, and, in opposition to the Chicago-New York canal schemes, favored the improvement of the Ohio River. She also secured new connections with Cincinnati and Chicago. Boston, with only one road to the West, endeavored to divert the terminus of the Grand Trunk from Portland to herself, to tap that road at Ogdensburg, New York, to divert the Erie Canal traffic at Albany by completing the Hoosac Tunnel, and to build a new road to the terminus of the Erie at Newburgh, New York. The obvious explanation of the great public interest in these and similar transportation projects is that the West appealed to all as a valuable market. There was, of course, the desire to find a new market to take the place of the lost Southern trade, but in this search the transportation lines would not have been so eager as they were to reach out to the West if the West had not been prosperous.¹

¹ This phase of the subject can be treated in only the very briefest form. It would be a large task to develop it and to give all the references. The interest of the commercial world in the Western trade and in transportation westward was very great.

To this survey there is but one possible conclusion. In the middle and last part of the war Western farmers enjoyed vigorous prosperity; there was steady progress in the size of the crops, in the extent of the cultivated area, and in population; profits were normal in the middle of the struggle, and in the last part of it extraordinarily high. The Westerners themselves claimed prosperity for their section, and the business interests of the East, in their endeavors to expand, recorded their belief in the same prosperity.¹

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¹ Great credit must be given to the national government for its wise and far-seeing legislation in favor of Western interests. In 1862 the Department of Agriculture was taken away from the jurisdiction of the Patent Office, where it was pinched and inefficient, and set up as an independent bureau. There were the Homestead Act and the Agricultural Land Grant Act, and an act in encouragement of immigration. Colorado, Arizona, Dakota, Nevada, Idaho, and Montana were organized as Territories, and Kansas and Nevada were set up as States. Colorado and Nebraska refused statehood. Rich government subsidies were guaranteed to the Union Pacific Railroad, with its branches in Kansas and Nebraska, and also to the Northern Pacific. In every year of the war armed forces gave protection from the Indians.

Mitchell, *History of the Greenbacks*, p. 388, says, 'It is safe to conclude from these figures that the farmers of the loyal States were among the unfortunate producers whose products rose in price less than the majority of other articles, and that from this standpoint they were losers rather than gainers by the paper currency.' "It seems very doubtful whether farmers, as a whole, did not lose more than they gained because of the price disturbances." This view is based on a study of but a single factor, and certainly must be changed by study of the other factors bearing on the situation.

NOTES AND MEMORANDA.

THE FRENCH METHOD OF CONTROLLING RAILWAY RATES.

The railway policy of France is based on the view that railways should be exploited, not by the State, but by strong independent companies under strict government control. National purchase has again and again been considered, but has always been rejected. When last it was proposed in the French Parliament that the State should buy out four of the large railway companies, one hundred Chambers of Commerce voted against, and one only for, the proposal. While the companies are encouraged to earn large profits,¹ they are never allowed to compete with one another, or to invade one another's territory, and their arrangements for sharing traffic or earnings constantly receive official sanction. The State has refrained from dictating their tariffs, and confined itself to exercising a veto over those which they propose. Under the Railway Conventions of 1883, as under those of 1859, the government has no power either to fix or to alter rates. The proposal of a rate must emanate from one of the companies, but before taking effect it has to be approved by the Minister of Public Works.

The official machinery by which this control over rates is exercised consists of three parts: a salaried corps of expert officials for gathering information; a large non-salaried committee made up of high officials, members of the legislature, and representatives of the business community, to give advice based on that information; and, lastly, the Minister who acts on that advice.

¹ M. Pelletan, in his report of May 12, 1889, pointed out that French railway shares paid from 10 to 24 per cent. of their original cost; since then there have been some increases in dividends.

The permanent officials who investigate and report on all questions concerning rates number 68, and cost the State 400,000 francs a year; that is, 10 francs for each kilometre of railway at present in operation.¹ Of this amount 258,500 francs represent the salaries of the chief experts, 32 in number.² At their head, receiving 20,200 francs a year, is the Director of Commercial Supervision (*Directeur du Contrôle Commercial*), who studies the tariffs and commercial workings of all the French companies. Under his orders are the General Supervisors of Commercial Exploitation (*Contrôleurs Généraux de l'Exploitation Commerciale*), each of whom has similar duties in respect to a single railway, receives 11,400 francs a year, and is assisted in his work by one Principal Inspector and several Special Inspectors. To each railway is assigned one Principal Inspector (*Inspecteur Principal*) of Commercial Exploitation, receiving 8,000 francs a year, and from three to five Special Inspectors (*Inspecteurs Particuliers*), each of whom receives from 6,500 to 5,500 francs a year. These inspectors are all under the orders of the General Supervisor in charge of that particular railway.

There is at the Ministry of Public Works a bureau of Railway Direction, one of the divisions of which investigates tariffs and charges, and the head of which is known as the Director of Railways (*Directeur des Chemins de Fer*). This high official acts as counsellor to the Minister on all points connected with railway administration.

But the Minister's chief adviser is the Consultative Committee of Railways (*Comité Consultatif des Chemins de Fer*) over which he presides, and which examines questions of rates as well as all others affecting the relations between the railway companies and the State. The organization of this Committee has been several times changed. In its present form, which dates from 1898, it has 100 unpaid

¹ The 40,000 kilometres "of general interest" are alone to be counted, since tariffs of local lines are, as a rule, passed upon by the prefects of the several departments.

² M. Sibille's Report on Budget of 1905 (*Ch. des Députés*, No. 1962), pp. 148, 183.

members, 10 *ex officio* and 90 appointed for two years by the President of the Republic. The present membership consists of 36 government officials (6 *ex officio*), 34 members of the legislature (4 *ex officio*), and 30 men holding no political office. A combination is thus secured of administrative, legislative, and general opinion.

Among the officials are the Director-general of Customs, a brigadier-general on the General Staff, the Directors of Forests, of Agriculture, of Commerce, and of Labor, the Director of Roads, Navigation and Mines, the Director of Commercial Supervision, the Director of Railways, and five other members of the Council of State. Among these last is M. Picard, well known as the author of the two principal works on French railways, who, as vice-chairman, presides over the Committee in the absence of the Minister; while M. Colson, another member, is almost equally well known for his book, *Transports et Tarifs*, and for the articles on Transportation which he contributes to the *Revue Politique et Parlementaire*. Both these officials have heretofore filled the post of Director of Railways.

Among the Deputies MM. Baudin, Barthou, Bourrat, and Sibille, and among the Senators M. Waddington, are specially conversant with railway problems, the first two being ex-Ministers of Public Works, and the three others having written elaborate reports on various railway questions.

In the general group we find twelve presidents or members of Chambers of Commerce (Paris, Lille, Havre, Lyons, Bordeaux, and Marseilles being among the cities represented), six presidents or members of national Agricultural Societies, two workingmen, the Governor of the Bank of France, seven business men or civil engineers, two of whom represent internal navigation, one judge, and one representative of the International Railway Congress. This last member, M. Griolet, is also vice-chairman of the Railway du Nord, and is the only railway official belonging to the Consultative Committee.¹

¹ For further particulars see J. De la Ruelle, *Contrôle des Chemins de Fer* (Paris, 1903), p. 218, and for the names of present members see *Annuaire du Min. des Travaux Publics*, 1906, p. 34.

General meetings of the Committee are seldom held, most of its business being transacted by its "permanent section," a sub-committee of 40 members (4 *ex officio*, 36 annually chosen by the Minister), which meets at least once a week. This "section" comprises twelve Senators and Deputies, six representatives of commerce, industry, and agriculture, three civil engineers, two workingmen, and the member of the Railway Congress, besides sixteen of the government officials. Matters of importance may be referred to the whole Consultative Committee by the Minister, or by the Vice-President either on his own initiative or upon the request of five members of the "section."

When a company wishes to introduce a new rate or to change an old one, the regular procedure is the following. The text of the proposed rate must be posted up or otherwise advertised in the company's stations, and sent to the Minister of Public Works, to the Director of Commercial Supervision, to the Prefects of departments, and to the Chambers of Commerce of districts affected by the rate. The Chambers of Commerce and the Prefects are expected to forward to the Minister in writing any protests or comments which they may wish to make.

The proposal is then carefully examined by the General Supervisor of Commercial Exploitation in charge of the railway proposing the rate, whose duty it is to report thereon. In this task he is assisted by the Principal Inspector and the several Special Inspectors of the railway in question. These officials are instructed personally to inform themselves as to the needs of trade and the views and wishes of business men. Having done so, they prepare a written report, which must embody "a thorough discussion of the prices proposed, and a comparison between them and other tariffs in force on the French railways at the various shipping points with which this traffic competes."¹ The report is submitted to the Director of Commercial Supervision, who transmits it with or without revision to the Minister of Public Works. As soon as these documents reach the

¹ Ministerial Circular of July 16, 1880.

Minister he lays them before the Consultative Committee. If this Committee makes a favorable report, the Minister approves the rate, and it usually goes into effect within fifteen days from that date. Thus on March 25, 1904, a proposed addition to one of the special tariffs of the Railway de l'Ouest was duly advertised. It was officially approved on the 11th, and took effect on the 26th of April, 1904.¹ No rate can become operative until one month after having been advertised. In order to keep the public fully informed, the text of the proposal and that of the ministerial approval are published in the *Journal Officiel*.

The ministerial sanction given to any rate may be withdrawn at any time, and, in accepting a rate proposed, the Minister may attach to his approval certain conditions to which the company must assent before the rate can take effect. A passenger rate cannot be increased till it has been in force three months, nor a freight rate till it has been in force one year.

The interval between the proposal and the approval of a rate, which is normally one month, is sometimes a great deal longer. Should it, however, be necessary to put a rate into immediate effect, the Minister often grants a provisional "homologation," whereby the rate becomes at once available pending its formal consideration and approval.

The French tariffs that have been thus approved are published in the two large folio volumes of the *Recueil Chaux*, a revised edition of which is issued quarterly. The edition bearing date July, 1905, but not actually issued till last September, has 1,712 pages in the volume containing the tariffs for slow freight, and 980 pages in that containing the rates for fast freight and passengers. These manuals would be less bulky if they embodied only the tariffs of the large companies, but they also include the rates of all the light railways, narrow-gauge lines, and tramways throughout France. In the intervals between the editions of this work newly approved rates are published in a special weekly bulletin, as well as in the *Journal Officiel*. Thus the author-

¹ *Journal Officiel*, April 3 and 25, 1904.

ized railway tariffs are at all times readily accessible to the French public.

Since the French regard railway tarification from a commercial standpoint, their tariffs, like those of England and the United States, are based on the so-called "value" system, which consists in charging such rates as the traffic will bear. Their system of classification would take too long to explain. Suffice it to say that, in compliance with the demands made by the government in 1879, the classification and description of freight was made uniform on all the French railways by their reformed tariffs approved between August, 1884, and December, 1890. At the same time the number of reduced tariffs and special rates was much cut down, and the *Recueil Chaix* considerably simplified. Since those reforms, however, the large family of special rates has continued to multiply, under the pressure of commercial needs, though the Consultative Committee is on principle opposed to them, and seeks, whenever possible, to procure in their stead reduced kilometric scales of rates drawn up on the Belgian differential plan, and applicable in any direction and on any line of the given railway.

In sanctioning a special rate, the Committee almost always insists, as a condition of approval, that intermediate stations shall also be entitled to it, and that a special rate, say from Toulouse to Orleans, shall be enjoyed as far as Orleans by goods shipped from Toulouse to points beyond Orleans.

The Minister of Public Works having no power to fix rates, the principal function of the Consultative Committee is to check unjust, discriminating, or capricious tarification, and thus by degrees to produce throughout France an equitable system of rates. It often suggests to the companies what changes it deems desirable, and, though it can only suggest, yet the possession of its veto often enables it, when granting one of the companies' requests, to gain its own point as a *quid pro quo*. This influence is all the stronger because the authority vested in the Minister, and through him in the Consultative Committee, covers not only

the commercial (*i.e.*, rate-making), but also the technical and financial¹ sides of railway administration.²

The Committee always declines to indorse any special rate savoring of undue preference or discrimination; for instance, a rate in favor of goods produced by a particular factory or of materials ordered by a particular contractor. It also rejects any rate calculated to draw away traffic from any other French railway or to ruin the business of coasting steamers or canal boats. Thus in April, 1899, a special rate of 15 francs on mineral waters shipped to Paris was requested by the P.-L.-M. Company. This rate was approved in April, 1900, but, the canal men of Roanne having pointed out that it was ruining them, the approval was withdrawn on August 24, 1901.

The Committee endeavors to adjust the tariffs enjoyed by competing industrial centres in such a way as to secure to each the natural advantages of its location. If, however, a particular place or industry has long had the benefit of certain special rates, and has thus acquired a *quasi*-vested right to them, the Committee will not allow them to be abolished without stipulating that they shall be re-established, "if within a year their disappearance gives rise to well-founded complaints."

A good illustration of the manner in which the Committee may obtain concessions from the companies is furnished by the negotiations leading up to the approval on October 27, 1900, of the new tariff of Accessory Charges (*Frais Accessoires*). The companies had for twenty-five years been urging that the registration fee for luggage should be raised to 15 centimes, while the Committee still insisted on maintaining it at 10 centimes. The Committee also wished that the companies should guarantee to the consignor of freight using the lines of several companies the route offering the

¹ *e.g.*, No railway company can issue bonds without the assent of the Consultative Committee and of the Minister.

² "It is clearly to the companies' interest not to offend an authority on which they are in so many ways dependent. A different system of administration, interfering only in commercial matters, would be far from having the same influence." Colson, *Transports et Tarifs*, 1898, p. 350.

cheapest combination of rates, even when not demanded by him, as they had been doing since 1883 for the consignor of freight using the lines of a single company. The companies, on the other hand, had been anxious to suppress certain special rates affecting about 1,350 kinds of freight. The matter was settled by a compromise, in which the companies waived their claim for the 15-centime registration fee, and consented to guarantee the cheapest route in the manner mentioned, while the Committee advised the Minister to sanction the suppression of the special rates on the ground that they were practically obsolete.¹

In Algeria and in the Regency of Tunis the service of commercial supervision has been organized in a manner practically identical with that above described, and proposals of rates are referred either to the Minister of Public Works in Paris or to the Resident-general in Tunis. This latter personage is assisted by a consultative committee of eight or ten members most of whom are officials connected with the administration of the Regency.

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¹ *Arrêté* du 27 Oct. 1900. Impr. Nat., 1902.

THE BRITISH INCOME TAX IN RECENT YEARS.

The recent reports of the British Commissioners of Inland Revenue¹ present figures as to the income tax for an unusually interesting period. During the years 1892-1904 the tax was subjected to two severe tests, the first being the depression of the early '90's, and the second the heavy increase of the rate during the Boer War.² The data of these reports serve to confirm the claim that this tax is so well administered that it responds quickly to changes in national prosperity, but is not sensitive to the rate at which it is levied,³ therein contrasting with inefficiently administered taxes, for which any considerable increase in rate induces evasion and decline in yield.

The income tax has been imposed continuously in Great Britain since 1842. For the first twelve years the rate was 7*d.* in the pound. In 1854, however, the rate was suddenly doubled on account of the Crimean War, and in the two following years the rate was 16*d.* The elasticity of the tax was well shown at this time. No serious leaks were discovered in the assessment, and in the weakest part, Schedule D, where alone declaration of the tax-payer is employed, the decrease in gross assessment was only 1.8 per cent. the first year, and 3.3 per cent. the second year of

¹ Forty-sixth Report, 1903; Forty-seventh Report, 1904. The figures given below, unless otherwise stated, have been copied or derived from these reports and (for 1903-04) the Statistical Abstract of the United Kingdom, 1904.

² The extraordinary burdens of the war may be judged from the following table of imperial army and ordnance expenditures, beginning and ending in a period of peace:—

	<i>Millions sterling.</i>
1897-98	19.3
1898-99	20.0
1899-1900	43.6
1900-01	91.6
1901-02	92.3
1902-03	69.1
1903-04	36.5
1904-05	29.2

(Statistical Abstract, 1904).

The immediate expenses of the war amounted to 217 million pounds (1899-1903.) Of this sum, 142 millions were added to the national debt, while customs and excise contributed 35 millions, and the income tax 40 millions, in excess of what they would have yielded on the peace basis of 1898-99.

³ See Hill's *Income Tax* (American Economic Association Studies, 1889), p. 381.

the war, while in the last year there was an increase of 1.1 per cent. During this emergency the income tax provided more than a sixth of the resources of the government,—10.9 millions out of 64.1 millions sterling. From the close of the Crimean War to the opening of the recent Boer War the rate has varied from 10*d.* to 2*d.* The only considerable annual decreases in gross assessment in Schedule D previous to 1892 were due to the financial depressions of 1865–66, 1878–79, and 1884–87, and to the large increase of exemption in 1876.¹ From 1864 to 1871 the rate varied from 4*d.* to 6*d.*, from 1872 to 1877 from 2*d.* to 4*d.*, and from the latter date until 1901 it ranged from 5*d.* to 8*d.* From 1883 to 1893 it was regularly at 6*d.*, and from 1894 to 1900 at 8*d.* But rates, whether uniform or changing, have produced no traceable effect upon the amounts of income discovered.

From Table I., below, it appears that since 1892 the yield of the tax as a whole has twice failed to show as great a percentage of increase as that of the rate of the duty. The two years in question were those ending April, 1894 and 1895, respectively; and these years represent the lowest ebb of the industrial depression. The greater part of the difference in the latter year, however, was due to the con-

TABLE I.

YEAR.	Rate in pence.	Income brought under review. (Million £.)	Taxable income. (Million £.)	Net produce. Yield of the tax. (Million £.)	Annual increase % of yield.	Annual increase % of rate.	Yield per penny of tax. (000£ omitted).	Annual difference in yield per penny. (000 £ omitted).
1892-93 . .	6	679.5	537.6	13.4	—	—	2,240	—
1893-94 . .	7	673.7	525.8	15.3	14.1	16.6	2,190	—50
1894-95 ² . .	8	657.1	475.7	15.9	3.9	14.0	1,980	—210
1895-96 . .	8	677.8	488.0	16.3	2.5	—	2,030	50
1896-97 . .	8	704.7	503.7	16.8	3.0	—	2,100	70
1897-98 . .	8	734.5	525.2	17.5	4.1	—	2,190	90
1898-99 ² . .	8	762.7	548.2	18.3	4.5	—	2,280	90
1899-1900 . .	8	791.7	564.9	18.8	2.7	—	2,350	70
1900-01 . .	12	833.4	594.1	29.7	58.0	50.0	2,480	130
1901-02 . .	14	867.0	607.6	35.4	19.1	16.6	2,530	50
1902-03 . .	15	879.6	608.6	38.0	7.3	7.1	2,540	10
1903-04 . .	11	902.8	615.0	28.2	—25.8	—26.6	2,560	20

¹ Consult Hill's *Income Tax*, pp. 378 ff. and the fourth table in the appendix.

² Exemptions increased.

siderable increase in exemptions and abatements, introduced at the time that another penny was added to the rate. During the five following years, while the tax remained constant at 8*d.*, there was a steady annual increase in the yield. On account of the extraordinary expenses entailed by the Boer War the rate was advanced, first to 1*s.*, then to 1*s.* 2*d.*, and finally to 1*s.* 3*d.*, or more than double the rate of the tenth preceding year. Fortunately, the need for additional revenue came at a favorable time. Although in a single year (1900-01) the rate was increased 50 per cent., the yield of the tax more than met all reasonable expectation, for it represented a 58 per cent. increase over that of the previous year. Again, in the following year, while the rate was increased by a sixth, the yield increased by nearly a fifth. The increase of rate in the next year was 7.1 per cent., while the increase of yield was 7.3 per cent.

Before concluding, however, that the tax rate does not affect the amount of income discovered, it is necessary to study the figures for the separate schedules, since the assessment for any given year is not in exact correspondence with the income of that year, except in Schedules C and E. The figures are:—

TABLE II.

Years ending April.	Schedule A.			Schedule B.			Schedule C.			Schedule D.			Schedule E.		
	Taxable income. (Million £.)	Net produce. (Million £.)	Per cent. of total net produce of tax.	Taxable income. (Million £.)	Net produce. (Million £.)	Per cent. of total net produce of tax.	Taxable income. (Million £.)	Net produce. (Million £.)	Per cent. of total net produce of tax.	Taxable income. (Million £.)	Net produce. (Million £.)	Per cent. of total net produce of tax.	Taxable income. (Million £.)	Net produce. (Million £.)	Per cent. of total net produce of tax.
1893	163.2	4.1	30.4	6.8	0.2	1.3	36.7	0.9	6.8	294.1	7.4	54.7	36.8	0.9	6.8
1894	166.1	4.8	31.6	6.3	0.2	1.3	37.1	1.1	7.0	279.7	8.2	53.2	36.6	1.1	7.0
1895	140.1	4.7	29.4	5.5	0.2	1.1	36.6	1.2	7.7	260.9	8.7	54.9	32.5	1.1	6.9
1896	140.7	4.7	28.9	5.2	0.2	1.1	36.4	1.2	7.4	271.8	9.1	55.7	33.9	1.1	6.9
1897	142.3	4.7	28.2	5.1	0.2	1.0	36.1	1.2	7.3	284.4	9.5	56.5	35.8	1.2	7.1
1898	143.1	4.8	27.3	5.0	0.2	1.0	36.0	1.2	6.8	303.6	10.1	57.8	37.5	1.2	7.1
1899	148.1	4.9	27.0	5.0	0.2	0.9	36.7	1.2	6.7	318.6	10.6	58.1	39.9	1.3	7.3
1900	149.0	5.0	26.4	4.8	0.2	0.8	36.2	1.2	6.4	332.1	11.1	58.8	42.7	1.4	7.6
1901	151.4	7.6	25.5	4.7	0.2	0.8	38.2	1.9	6.4	354.0	17.7	59.6	45.8	2.3	7.7
1902	152.2	8.9	25.1	4.4	0.3	0.7	40.8	2.4	6.7	363.0	21.2	59.7	47.2	2.8	7.8
1903	152.3	9.5	25.0	4.3	0.3	0.7	42.3	2.6	7.0	361.4	22.6	59.4	48.3	3.0	7.9
1904	156.2			4.4			40.3			364.4			49.7		

Schedule A.

Under Schedule A are taxed the owners of real estate. The tax is first paid in nearly all cases by the occupiers, but the latter are authorized to deduct the tax from their rent. Landlords thus contribute about a fourth of the total yield. In 1893 they contributed more than 30 per cent., but the proportion to the total has declined, principally on account of the growth of business profits. There has been no absolute decrease in gross income from rents, while the variations in the income that was taxable have been due to actual changes in rental values or to authorized revaluations. There has been no possibility of concealing income from this source in order to avoid the increased burden of taxation. The only actual decrease in taxable income was in 1894-95, due to the introduction of allowance for repairs. The regular quinquennial revaluations outside the metropolis resulted in very large increases in 1893-94 and 1903-04, and especially in 1898-99.¹ Of the other years, that in which the increase in taxable income was most noteworthy was 1900-01, the year, as it happens, when the tax rate was raised by the greatest amount. The corresponding figures for gross income from houses show even more distinctly the influence of the several revaluations. Income from lands, on the other hand, has been uninterruptedly declining. These facts are shown by the following table:—

TABLE III.

Year ending April.	Rate.	Gross profits from houses. (Million £.)	Annual difference. (Million £.)	Gross profits from lands. (Million £.)	Assumed profits from occupation of lands ($\frac{1}{4}$ annual value). (Million £.)	Annual difference. (Million £.)
1893 . . .	6	145	—	57	19.1	—
1894 . . .	7	149.7	+4.7 ²	56.2	18.6	— .5 ²
1895 . . .	8	151.7	+2.0	55.8	18.5	— .1
1896 . . .	8	154.5	+2.8	55.4	18.4	— .1
1897 . . .	8	158.8	+4.3 ³	54.8	18.3	— .1
1898 . . .	8	161.9	+3.1	53.9	18.1	— .2
1899 . . .	8	170.2	+8.3 ²	53.	17.4	— .7 ²
1900 . . .	8	174.4	+4.2	52.8	17.3	— .1
1901 . . .	12	179.0	+4.6	52.6	17.3	—
1902 . . .	14	184.6	+5.6 ³	52.5	17.3	—
1903 . . .	15	188.5	+3.9	52.2	17.2	— .1
1904 . . .	11	198.0	+9.5 ²	52.5	—	—

¹ There were similar revaluations in the metropolis in 1896-97 and 1901-02.² Revaluation outside the metropolis.³ Revaluation in the metropolis.

Schedule B.

As profits from the occupation of lands are assumed to be one-third of their annual value, the taxable income of farmers has been declining.¹ This decline (see Table II.) amounted to 36 per cent. in a decade. On the other hand (see Table III.), farmers' assumed gross profits declined only 10 per cent., for there was an increase in deductions allowed.

Schedule C.

In Table IV. will be found the assessed income from governmental securities. It appears that there was no decline in the assessment when the rate was raised in 1894. In the next year, when the rate was again raised, the assessment did fall off; but the entire decrease was from British securities, taxed by stoppage. The decrease in the assessment of 1896-97, was also due to the falling off of income from British securities, which continued to decline until 1900-01, when it suddenly rose, owing to war loans. From governmental securities taxed by deduction, there has been a steady rise in income from India, the colonies, and America; a sudden increase from Asia; and a constant income from Africa and the continent of Europe.

TABLE IV.
ASSESSED INCOME FROM GOVERNMENT SECURITIES.
(*Million £.*)

Year ending April.	British.	Indian.	Colonial.	European.	Asiatic.	African.	American.	Total.
1893	15.2	7.8	—	—	—	—	—	38.3
1894	15.1	7.9	—	—	—	—	—	38.9
1895	14.7	8.0	10.5	1.8	.1	.8	2.8	38.6
1896	14.1	8.0	10.7	1.7	.3	.7	2.8	38.6
1897	13.6	8.1	10.7	1.7	.6	.7	3.1	38.5
1898	13.2	8.2	10.8	1.6	.7	.7	3.4	38.6
1899	12.9	8.3	11.0	1.7	1.0	.7	3.8	39.4
1900	12.7	8.3	11.3	1.7	1.2	.7	3.5	39.4
1901	14.1	8.6	11.5	1.6	1.3	.7	3.6	41.4
1902	16.2	8.9	11.8	1.6	1.3	.6	3.9	44.3
1903	17.1	9.0	12.4	1.5	1.3	.6	4.1	46.1
1904	16.0	8.7	12.9	—	—	—	—	44.9

¹ Nurseries and market gardens in this schedule are assessed by different rules. The profits from these sources amounted to less than £30,000 in 1902-03.

Schedule E.

No schedule shows as large and as constant annual increase as does that one which embraces salaries of government and public company officials. (See Tables II. and V.) Gross income under this head shows far greater increases than taxable income, largely because public companies have been rapidly increasing; and many of their employees, assessable under this schedule, receive salaries below the limit of exemption. The only year in which there was a decline instead of a large increase in gross income reviewed in this schedule was 1894-95, when business was very dull. Bankers' clearings for 1894 (January to December) showed a decrease of 2.1 per cent. over those of the previous year, and, as compared with those of 1890, a decrease of 18.7 per cent. Business failures (in which public companies participated) in 1892, 1893 and 1894 had been unusually numerous; and company promotion had appreciably slackened in 1891, 1892, and 1893.¹ Finally, in 1893-94, figures of gross income included salaries of those with total incomes between £150 and £160, while those of subsequent years excluded such salaries. Hence, although the rate in 1894-95 was raised a penny, there is not the slightest ground for attributing the decline in assessment to this fact.

TABLE V.
SALARIES OF GOVERNMENT, CORPORATION, AND PUBLIC COMPANY OFFICIALS
UNDER REVIEW.
(*Million £.*)

1892-93 . . .	51.6	1896-97 . . .	56.4	1900-01 . . .	75.4
1893-94 . . .	52.6	1897-98 . . .	59.8	1901-02 . . .	79.2
1894-95 . . .	51.0	1898-99 . . .	65.3	1902-03 . . .	82.4
1895-96 . . .	53.3	1899-1900 . .	70.1	1903-04 . . .	86.1

It appears, therefore, that Schedules A, B, C, and E show no sign of being influenced by the rate of the tax, while A, B, and E show promptly the effect of changing conditions of prosperity. Prosperity or depression is not as accurately reflected in Schedule C, but in this case correspondence is not to be expected. In times of depression,

¹ Statistical Abstract, 1904; Tugan-Baronovski, *Handelskrisen in England*, p. 150.

reliable securities abroad are apt to be sought for the very reason that business at home does not tempt investment.

Schedule D.

There still remains for examination the income reviewed under Schedule D, which now provides about 60 per cent. of taxable income and of the revenue from the income tax. It represented in 1903-04, 44 per cent. of the gross income brought under review, the wide difference between the two percentages being due to the fact that persons and firms whose incomes are below £160 are not required to declare their incomes; while in the case of the other schedules, and likewise in that part of Schedule D which applies to companies, such income is brought under review, but is omitted from taxable income. Schedule D covers, in general, business profits. But the variety of rules employed in it, requires a more detailed analysis than any of the other schedules in order to test the efficiency of the tax. It will suffice to call attention to the following rules of assessment:—

(1) Income from investments abroad, not taxed under Schedule C, and from loans secured on the public rates is taxed for the year current.

(2) Railways, gasworks, ironworks, waterworks, canals, quarries, markets, tolls, fishings, shootings, cemeteries, salt springs, and alum works are taxed on the profits of the year preceding.

(3) Mines, transferred from Schedule A, are still taxed on the basis of quinquennial valuation.

(4) Other profits, including salaries not taxed under Schedule E, are assessed upon the average income of the three business years preceding the year of assessment.¹

(1) Interest from loans secured on the public rates calls for little comment. This income increased every year of the period, as local indebtedness is growing, and there is no possibility of concealing income from this source.

¹ In this analysis three unimportant groups of Schedule D are altogether omitted.

TABLE VI.
INTEREST FROM LOANS SECURED ON THE PUBLIC RATES.
(Million £).

1892-93	3.9	1897-98	6.6 ¹
1893-94	4.1	1898-99	5.8
1894-95	5.0	1899-1900	5.9
1895-96	5.1	1900-01	6.0
1896-97	5.2	1901-02	6.6
		1902-03	7.0

The ascertaining of income arising from foreign investments not taxed under Schedule C is one of the two least perfect parts of the system. Income from abroad can be concealed more easily than any other. A statute of 1885, requiring bankers, coupon dealers, and agents entrusted with the payment of interest and dividends to deduct on behalf of the revenue, resulted immediately in a 22 per cent. increase in the assessment upon foreign securities in this schedule. It is generally felt² that many still escape taxation on their foreign income by avoiding agents altogether, but how much is lost in this way it is impossible to estimate with any accuracy. The figures in Table VII. tend to confirm, though they do not convincingly prove, the justice of this suspicion. In 1893-94, when there was an increase of a sixth in the rate, there was a decrease of assessment upon non-governmental foreign securities amounting to £700,000, or 2.2 per cent. In the next year, with an increase of a seventh in the rate, there was a decrease of £1,800,000, or 5.7 per cent. These are perhaps attributable in part to the financial depression of those years, though foreign securities, more automatically taxed, showed no such decline. But, since these were years of dulness in most other countries, not much stress can be laid upon this difference. Depression, however, cannot account for the fact that there was a decrease of £500,000, or 1.5 per cent., in this branch of Schedule D in 1900-01 at the time of a 50 per cent. increase in the rate, for this was a time of prosperity; and no other important source of income showed any decrease which can be traced to this year. The decrease in the case of foreign securities, to be

¹ Unusual increase due to a single large assessment subsequently vacated.

² See Forty-sixth Report of the Commissioners of Inland Revenue, p. 173, and *Hill*, pp. 341, 342.

sure, was slight; but it must be remembered that it would be difficult to conceal in a single year income which had been taxed in the previous year. While, therefore, the loss was slight in this instance, it indicates the possibility of larger permanent concealments. In the next year, however, when the rate was advanced a sixth, the showing was good; for there was an increase in assessment of £1,000,000, or 4.2 per cent. Although it thus appears that there is considerable room for evasion of this branch of the tax, it is also true that there is a very large part of this form of income that cannot escape taxation, or can be made to do so only with extreme difficulty. In the year 1902-03 the total assessed income from foreign securities other than government loans amounted to 34.9 millions. Of this 30.5 millions were derived from agents, bankers, coupon dealers, and public companies. The evasion was confined, for the most part, to private individuals and firms, who together declared only 4.4 millions. The following table shows the results of the assessment of these securities for a period of years:—

TABLE VII.

COLONIAL AND FOREIGN SECURITIES (OTHER THAN GOVERNMENT) AND POSSESSIONS, "COUPONS," AND RAILWAYS OUT OF THE UNITED KINGDOM (OTHER THAN INDIAN GUARANTEED RAILWAYS).
(*Million £.*)

1892-93 32.	1896-97 31.5	1900-01 33.1
1893-94 31.3	1897-98 31.3	1901-02 34.4
1894-95 29.6	1898-99 33.2	1902-03 34.9
1895-96 30.5	1899-1900 . . . 33.6	1903-04 36.9

(2), (3). Reported earnings from railways corresponded roughly to the general conditions of trade. The highest assessment, 1900-01, reflected the exceptional prosperity of the previous year. Income from gasworks declined only once before 1901. The earnings of ironworks fell as the result of the depression of '93, and remained constant for several years, but since the revival of business have risen rapidly. Waterworks and quarries show gains without any interruptions. Canal earnings fluctuated, on the whole declining. Thus, in all the industries where earnings are ascertained from year to year, the fluctuations have been entirely independent of the rate of the tax. The same is true of mining

where the profits of five years are averaged. In these industries there is little possibility of concealing profits, which, with the exception of about £5,500,000, are all earned by public companies or local authorities, and hence the tax is collected by deduction.

TABLE VIII.
ASSESSED EARNINGS OF INDUSTRIES TAXED BY SPECIAL RULES FOR THE
YEARS—
(Million £.)

	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.
Railways . . .	36.3	35.8	34.4	36.5	37.5	39.7
Gasworks . . .	4.5	4.8	5.1	6.0	5.5	5.6
Ironworks . . .	2.1	1.8	1.8	1.9	1.8	2.6
Waterworks . . .	3.7	3.8	3.9	4.0	4.0	4.3
Canals . . .	3.5	3.5	3.3	3.6	3.4	3.6
Quarries . . .	1.0	1.0	1.1	1.1	1.2	1.4
Markets, etc. . .	1.7	1.7	1.7	1.7	1.8	1.9
Mines ¹ . . .	12.0	12.3	12.7	12.3	10.5	9.1

TABLE VIII. (Continued).

	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.
Railways	40.0	39.4	40.7	38.7	38.1
Gasworks	5.6	6.1	6.4	5.9	5.5
Ironworks	3.0	3.2	5.4	6.6	4.0
Waterworks	4.5	4.6	4.7	4.7	4.8
Canals	3.5	3.5	3.4	3.2	3.4
Quarries	1.5	1.6	1.7	1.6	1.5
Markets etc.,	1.8	1.3 ²	1.3	1.3	1.4
Mines ¹	8.9	9.5	12.0	17.6	20.3

(4) In the entire scope of the income tax there are only two branches in which there is room for serious failure in reaching income liable for the tax. The case of foreign securities in Schedule D has already been noted. Difficulties of another sort arise in connection with trades and professions exercised within the United Kingdom by single persons or by firms (unincorporated). Here it is impossible to conceal all income, as one might conceivably do with foreign investments; but it is a matter of less difficulty to conceal a *part* of one's earnings from business pursuits. It is far more urgent to administer the tax efficiently with respect to this income than with reference to that drawn

¹ These figures give 5-year averages.

² Certain assessments transferred to Schedule A.

from abroad, since the sum involved is many times larger. In 1902-03 the income assessed to persons and firms and to their employees was 202.2 millions. Obviously, this sort of income presents inevitable difficulties under any method of assessment; but a well-organized and zealous administration can reduce the possibility of evasion to a very low range by carefully checking the declaration of the taxpayer with the help of all available information. To secure this result, most elaborate provision has been made, and with much apparent success. Furthermore, public companies are continually superseding private persons and firms in the prosecution of trade and industry; and this movement greatly simplifies the work of the revenue agents. Since 1893 the proportion assessed to business under private management has fallen from 73.2 per cent. to 55.3 per cent. of the total. Indeed, private profits, so far as discovered, were higher in absolute amount in 1891-92 than in any subsequent year until 1899-1900, and fell again in 1902-03. On the other hand, profits of incorporated companies failed only once to show an annual increase; and, though the percentage of gain was not large until 1895-96, in each of five of the years succeeding the gains were 13 per cent. or over.

TABLE IX.
INCOME UNDER SCHEDULE D NOT ASSESSED ACCORDING TO SPECIAL RULES.¹

Year ending April	Total gross income. (Million £.)	Income assessed to persons and firms. (Million £.)	Per cent. of total.	Annual per cent. of increase.	Public companies and local authorities. (Million £.)	Annual per cent. of increase.
1892	263.9	193.6	73.3	—	70.4	—
1893	261.6	190.2	72.7	-1.7	71.4	1.4
1894	252.1	184.7	73.2	-2.8	67.4	-5.6
1895 ²	238.6	170.9	71.5	-7.5	67.7	0.4
1896	250.6	173.2	69.1	1.3	77.4	14.3
1897	271.1	181.5	66.9	4.7	89.6	15.6
1898	291.4	188.1	64.5	3.6	103.3	15.2
1899 ²	304.3	191.7	63.0	1.9	112.6	9.0
1900	322.8	195.1	60.4	1.7	127.7	13.4
1901	347.0	196.5	57.4	2.2	147.5	15.5
1902	361.5	205.4	56.8	2.9	156.1	5.8
1903	365.1	202.2	55.3	-1.5	162.9	4.3
1904	367.4	—	—	—	—	—

¹ See Forty-fifth Report, Inland Rev. Com., p. 189, for the data from 1892 to 1901. The official designation of this group is now "Business not otherwise detailed." Before 1900 it was known as "Trades and professions."

² Exemption increased.

Inasmuch as the encroachment of company organization prevents any appreciable increase in income from private trades and professions, it would be improper to compare these fluctuations either with changes in the rate of taxation or with changes in commercial prosperity. But in Table X. will be found a comparison of annual increases of the combined profits assessed to persons, firms, public companies, and local authorities, with corresponding increases of bank clearings for the triennial periods upon which the assessment for each year was based:—

TABLE X.

	Total gross income of unspecified businesses. (Million £.)	Per cent. increase.	Per cent. increase of average bank clearings in each corresponding triennial period.
1891-92	263.9	—	—
1892-93	261.6	—0.8	—0.4
1893-94	252.1	—3.6	—5.0
1894-95	238.6	—4.5 ¹	—6.2
1895-96	250.6	5.0	—2.5
1896-97	271.1	8.1	5.3
1897-98	291.4	7.4	5.8
1898-99	304.3	4.4 ¹	5.3
1899-1900	322.8	3.1	2.4
1900-01	347.0	7.4	6.8
1901-02	361.5	4.1	5.9
1902-03	365.1	0.9	5.5
1903-04	367.4	0.6	3.1

As already stated, these profits are assessed on the average of three years preceding the year of assessment. Thus the assessment of 1897-98 would represent the average profits of the three years ending April 5, 1897, "or on the date immediately preceding, to which the annual accounts of the trade, profession, employment, or vocation, have been usually made up."² Under this rule the most common average represented by the assessment of 1897-98 would be that of the calendar years 1894, 1895 and 1896. Therefore, in Table X. (above), the increase of assessment of this year has been compared with the increase of the average of bank clearings in 1894, 1895 and 1896 over the average

¹ Exemption increased.² See Hill, Appendix A, p. 391.

of 1893, 1894 and 1895. And so for other years. It appears that the decreases of gross income under this head in 1892-95 were less heavy than corresponding decreases of bank clearings. Until 1901-02 all the subsequent annual increases of this income brought under review were larger, with one exception, than were the corresponding increases in bank clearings. As bank clearings are, in a country like Great Britain, the best single test of national prosperity that we have, this comparison speaks well for the accuracy of the assessment in this branch, considering all the obstacles which have to be met. This comparison down to and including 1900-01 is sufficiently significant to commend caution in interpreting the less favorable showings since that date. While it seems clear that small changes in the rate have produced no traceable effect upon the assessments in this group, it would not be surprising if the unusual increase of rate did, indeed, induce a certain amount of concealment. That the assessment merely held its own under so severe a strain is cause for approbation. Even the assessment upon private trades and professions has declined so little that the decrease might, in any other time, have been attributed wholly to reorganizations into companies.

Whether or not actual concealment has been stimulated in a small degree, it is certain that one fiscal disadvantage must be balanced against the gain by the high rate. This is the increasing resort to the practice of claiming abatements. When the rate was comparatively low, many who were legally entitled to abatements paid in full rather than suffer the inconveniences and possible embarrassments necessary to secure relief. With the heavy rate there were many who felt that they could no longer afford to forego the abatements, and many more for the first time discovered that they were entitled to abatement. It has even become a profitable business to guide tax-payers through the formalities required for obtaining this relief.¹ Hence the high rate has introduced what may prove to be a per-

¹ Consult Goschen, *Essays and Addresses on Economic Questions*, London, 1905, pp. 246 ff.

manent deduction from taxable income. But this result in no wise reflects upon the efficiency of the system of administration. The effect has rather been to force taxpayers to claim what the law intended that they should claim.

This survey has shown the utility of the method of subdivision in administering the tax, the advantage of which is not only to facilitate the application of the surest methods of approach to the various kinds of income, but also to aid in locating, and hence more easily correcting, imperfections in the system. But perhaps the greatest merit of this tax is that it approaches nearly all income without the assistance of the ultimate payer of the tax. In fact, less than one-fourth of all the income brought under review is now assessed upon the basis of declarations made by the taxpayers.¹ And, even in cases where the income cannot be taxed at its source, the officials can estimate a considerable part of it with sufficient accuracy to make evasion extremely difficult. Probably less than 10 per cent. of all the taxable income manages to escape taxation.

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¹ The following table shows, as precisely as can be ascertained, the gross assessment of incomes taxed indirectly, by deduction, etc., and directly, upon declaration:—

		<i>Million £ (1902-03)</i>
I. Declaration of the tax-payer unnecessary:—		
A.	Ownership of lands and houses, etc., external marks,	241.9
B.	Occupation of lands, external marks	17.5
C.	Government securities, stoppage, and deduction . .	46.1
D.	Foreign business securities, where income is received through agents or public companies, deduction . .	30.5
D.	Profits of companies and local authorities, deduction,	245.6
E.	Salaries of government and of public company officials, stoppage, deduction, and declaration of employing company	82.4
		<hr/> 664.0
II. Taxed by declaration:—		
D.	Profits and salaries, persons and firms, declaration .	211.2
D.	Foreign securities taxed by declaration	4.4
		<hr/> 215.6
		<hr/> 879.6

THE AMERICAN SOCIOLOGICAL SOCIETY.

Whatever differences of opinion there may be with regard to the precise meaning of the term "sociology," it will be generally admitted that it indicates in a more or less satisfactory way a field of investigation, important and but partially exploited, differing from that of economics and political science. As early as 1836 John Stuart Mill held that the time was ripe for marking off from economics a general social science to which he gave the name of "social philosophy." At all events there is a sociological viewpoint quite distinct from the political and the economic, and the distinction has been recognized in a multitude of ways. There are professors and instructors of sociology in several of our educational institutions, and in nearly all of them courses are offered in sociology. The literature of the subject, even if we count only those books and articles which advisedly bear the designation, is extensive and by no means without influence. Three periodicals—American, French, and Italian—are entitled sociological, and several European countries already possess sociological associations which hold regular scientific meetings and publish papers and "proceedings."

Since, then, the term "sociology" has come to stay, and is used to designate a certain (or uncertain) subject or group of subjects, and since the number of those who are devoting time and energy to sociology is not only large, but apparently increasing, the same considerations which have made it desirable for economists, political scientists, statisticians, and historians to form scientific associations for the encouragement of research and discussion and for mutual intercourse, apply with equal force to sociologists. Nay, they apply with more force, inasmuch as theoretical sociology has grown up mainly through the work of mentally isolated thinkers, who have developed their own views to the neglect

of much that is valuable in the work of others. Academic sociologists, moreover, have too frequently lost sight of the connection which exists, or ought to exist, between the theoretical and analytical aspects of the subject, on the one hand, and, on the other hand, its practical aspects. Meanwhile many practical sociologists have known little, and cared less, for theoretical sociology, and in some instances have shown a tendency to fall into empiricism. To bring these classes together would help them all, and at the same time exalt sociology in the eyes of the general public.

It was to accomplish this bringing together that a general invitation was issued last December to about two hundred and fifty persons supposed to be interested in sociology, calling for a conference at Baltimore to discuss the advisability of forming a sociological association. Although the invitation was issued but a short time before the date set for the conference, some fifty persons, representing twenty-one colleges and universities and a dozen organizations engaged in social amelioration, attended the meeting, while more than sixty others expressed their opinions on the subject by letter. The consensus of opinion was overwhelmingly in favor of forming a sociological association at once, this association to meet hereafter annually at the same time and place as the Economic Association. It was also decided that the new association should be primarily scientific in character, not popular or propagandist, and not to be associated in any way with particular doctrinal ideas or with particular schemes of social betterment. By designating the new society as primarily scientific, however, it was not proposed to exclude practical workers in the sociological field, so long as such workers are also interested in the essentially scientific phases of the subject. Nor should the new society be conceived as in any sense a rival of, or an encroachment upon the domain of, the Economic Association or the Political Science Association. Furthermore, to such organizations as the National Conference of Charities and Correction the new society bears about the same rela-

tion as a treatise on light bears to an elementary manual on ophthalmology.

This, at all events, appears to have been the attitude of the conference. Time will tell, and time alone, what the precise scope of the new society will be. Probably enough has been said to suggest the intentions of those who founded it. A good clew to the nature and aims of the organization, at least for the present, is conveyed by the list of officers elected for the present year: president, Lester F. Ward, Washington, D.C.; first vice-president, William G. Sumner, Yale University; second vice-president, Franklin H. Giddings, Columbia University; secretary and treasurer, C. W. A. Veditz, George Washington University; executive committee,—in addition to the above officers,—Edward A. Ross, University of Nebraska; Walter F. Willcox, Cornell University; Albion W. Small, University of Chicago; Samuel M. Lindsay, University of Pennsylvania; F.M. Davenport, Hamilton College; D. Collin Wells, Dartmouth College.

C. W. A. VEDITZ.

WASHINGTON, D.C.

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I. GENERAL WORKS. THEORY AND ITS HISTORY.

- BEAUREGARD (P.). *Éléments d'économie politique*. Paris: Picard. 1905. 8vo. 5 fr.
- BOWER (F.). *A Dictionary of Economic Terms*. New York. 1905.
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- ESSLEN (J.). *Das Gesetz des abnehmenden Bodenertrages seit Justus v. Liebig*. Munich: J. Schweitzer. 1905. 8vo. pp. 298. 8 m.
 [Part I. gives a history of dogma since Liebig; Part II. considers the bearings on intensive and extensive agriculture, agricultural improvements, foreign competition. The author is Doktor der Staatswirtschaft; the book scholarly and thorough.]
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 [A welcome collection of important papers upon banking, currency, crises, distribution, and other subjects. The author has added to the original addresses both introductory and supplementary notes.]
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[Inaugural address as rector of the University of Vienna; the theme being that individual responsibility, in conjunction with institutions for mutual aid, is essential to social progress.]

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[An interesting attempt to treat the works of Spencer, Schäffle, and Ratzenhofer as parts of one systematic whole.]

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[The author is Professor of Law at Halle. The first edition appeared in 1896.]

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EBERSTADT (R.). Die Spekulation, ihr Begriff und ihr Wesen. Jahrb. f. Gesetzg., 1905, Heft 4. [The object of the paper is to distinguish between an economically justifiable and socially useful speculation in securities and produce, and a parasitic, harmful land speculation.]

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II. THE LABOR PROBLEM.

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- BENOIST (C.).** L'organisation du travail. Tome I. Mines de houille, métallurgie, construction mécanique, verrerie, industrie textile. Paris: Plon-Nourrit. 1905. 8vo. 10 fr.
- BITTMANN (K.).** Die badische Fabrikinspektion im ersten Vierteljahrhundert ihrer Tätigkeit 1870-1903. Ein Rückblick auf die Entwicklung der Industrie, Arbeiterschaft, Arbeiterschutzgesetzgebung, und Gewerbeaufsicht. Karlsruhe: Macklot. 1905. 8vo. pp. 452.
[A valuable report.]
- COMMONS (J. R. and others).** Restriction of Output. Eleventh Special Rept., U.S. Dept. of Labor. [The best discussion to date of the actual practices, both of American and British trade unions.]
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- FRISCH (W.).** Die Organisationsbestrebungen der Arbeiter in der deutschen Tabakindustrie. Leipzig: Duncker und Humblot. 1905. 8vo. pp. 360. 5.60 m.
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- LEFORT (J.).** Les caisses de retraites ouvrières. Paris: Fontemoing. 1905. 8vo. 2 vols. 18 fr.
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[Part I. gives history; II., an exposition of the legislation (by far the longest part); III., a statement of the gains for workmen, employers, communes.]

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- TILLYARD (F.). *Three Birmingham Relief Funds*. Econ. Journ., Dec. [An interesting account of the administration of three relief funds, in 1886, 1886, 1905. The main conclusion is that skilled artisans

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- BRUNHUBER (R.). *Die heutige Sozialdemokratie. Eine kritische Würdigung ihrer wissenschaftlichen Grundlagen und praktischen Parteigestaltung*. Jena: G. Fischer. 1905. 8vo. pp. 216. 3 m.
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- *MARX (Karl). *Theorien über den Mehrwert*. Band I: *Die Anfänge der Theorie bis Adam Smith*. Band II: *David Ricardo*. Stuttgart: J. H. W. Dietz. 1905-06. 8vo. 5.50 m., 9.50 m. [Posthumous works by Marx,

edited by K. Kautsky, from the manuscript *Zur Kritik der politischen Oekonomie*. The second volume, on Ricardo, is issued in two parts.]

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IV. LAND AND AGRARIAN PROBLEMS.

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[An excellent work on the subject at large, including statistics, legislation, administration by state, commune, and individuals, taxation, the state of trade, and the like. The author is professor at Munich.]

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[Discusses various forms of "privilege" now existing in the United States, particularly the privilege of land ownership. Interesting in its discussion of problems, if not in its proposed sovereign remedy.]

HAGGARD (H. R.). The Poor of

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LOUIS (P.). Le colonialisme. Paris: Soc. nouv. de libr. 1906. 16mo. pp. 111. 50 cts.

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[An elaborate report to the Board of Trade, by Professor Mavor, of Toronto, on the geography, meteorology, agricultural exploitation, transportation of the region. The wheat-producing possibilities are reported to be enormous.]

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[Contains maps and charts, together with a great deal of statistical matter relating to the public lands, and recommends certain changes in the laws.]

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- PRIMOLENI (A.). Le condizioni del salario agricolo in provincia di Cagliari. *Il Giorn. degli Econ.*, Oct.
- RUDLOFF (H. L.). Die Schlachtviehpreise in Paris unter dem Einfluss der Viehsölle. *Jahrb. f. Nat. Oek.*, Oct.
- SCARSON (Thea.). The Quarter Centennial of the Single-Tax Movement. *Westm. Rev.*, Dec., 1905.
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- UNDESIGNED. Irish Land Purchase. *Edinburgh Rev.*, Oct., 1905. [A review of a number of reports and speeches.]

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- LEWIS (C. J. and J. N.). Natality and Fecundity. London: Oliver & Boyd. 8vo. 7s. 6d.
- SCALISE (G.). L' emigrazione dalla Calabria. Naples: L. Plerio. 1905.
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- Miss Balch has spent considerable time in the Slavic parts of the Austrian Empire, studying the life of the populations from which our immigrants come.]
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[Contains many statistical facts about English railways.]
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[Mainly secondary in character, but valuable for legal purposes; by the author of "Intercorporate Relations." Proposes to reverse the President's plan by primarily submitting contests to the courts, and thereafter permitting the Interstate Commerce Commission, when authorized, to name a new rate.]
- In Periodicals.*
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- BASCOM (J.).** Railroad Rates. Yale Rev., Nov., 1905. [Favorable to government regulation.]
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- ESCH (J. J.) and OTHERS.** Symposium on Federal Control of Railroad Rates. Moody's Mag., Jan. [Other contributors are David Willcox, J. B. Dalsch, J. H. Maddy, H. E. Montgomery, F. N. Judson, W. C. Noyes, F. S. Gardner, C. S. Hamlin, H. T. Newcomb, Robert Baker, O. E. Butterfield, H. R. Meyer, W. D. Hines, E. J. Rich, Robert Bickerdike. A decidedly one-sided symposium, representing opinion hostile to federal control.]
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VII. FOREIGN TRADE AND COLONIZATION.

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- CHÉRADAME (A.).** La colonisation et les colonies allemandes. Paris: Plon-Nourrit. 1906. 8vo. 12 fr.
- FANNO (M.).** L'espansione commerciale e coloniale degli stati moderni. Turin, Italy: Fratelli Bocca. 8vo. pp. 499. 12 l.
- [A detailed study of the colonial expansion of Holland, France, Great Britain, Germany, and the United States, with a discussion of the general laws of commercial and colonial expansion. An important book.]
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- [An important account of the tariff history of France, from the time of Colbert, with chief attention to the 19th century, and of the Chamberlain agitation in England; the whole from the author's uncompromising free-trade standpoint. A separate part is given to careful inquiry on the food supply of France, and the effect on it of protection.]
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- [Translated from the Hungarian by A. Rosen. The author is a former minister of commerce, now professor at Buda-Pest.]
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- MARTINET (C.).** Les ports francs et l'exportation des vins. Paris: Larose. 1906. 12mo. 3.50 fr.
- NITZSCHE (M.).** Die handelspolitische Reaktion in Deutschland. Eine histor.-polit. Studie. Stuttgart: Cotta. 1906. 8vo. pp. 250. 6.80 m.
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- ELTZBACHER (O.).** Unemployment and the Moloch of Free Trade. Nineteenth Cent., Dec., 1906.
- FLEMING (Owen).** The New German Tariffs (1906). Econ. Rev., Oct., 1906.
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- GLIER (L.).** Die Struktur der deutschen Ausfuhr nach den Vereinigten Staaten von Amerika. Zeitschr. f. Soc., Oct., Nov. [Emphasizes the decline in the German exports to the United States of finished staple wares. The author is secretary of the Mid-European Economic Union.]
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handels in den Kulturstaaen. Zeitschr. ges. Staatsw., 1905, Heft 4.

READ (B. L.). Canada and Preferential Tariffs. Moody's Mag., Dec., 1905.

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SCHILDER (S.). Die Meistbegünstigungsklausel. Zeitschr. f. Soc., Oct. [An appreciative criticism of Glier's recent book.]

VIII. MONEY, BANKING AND EXCHANGE.

ALGLAVE (P. and others). Questions monétaires contemporaines. Paris: Larose. 1905. 8vo. pp. 852. 15 fr.

[A very useful volume, containing ten monographs by as many recent graduates of the Faculty of Law in Paris, prepared under the direction of Professors Cauwès, Louchon, and Bourguin. The subjects treated cover most of the problems of recent monetary experience, such as the production of gold and silver, the struggles for monetary reform in Italy, Spain, Russia, Austria, Argentina, Brazil, China, Japan, etc., also theoretical subjects such as index numbers and the quantity theory. A valuable contribution.]

ARNOLD (A., Bankassessor). Das indische Geldwesen unter bes. Berücks. seiner Reformen seit 1893. Jena: G. Fischer. 1906. 8vo. pp. 360. 8 m.

CHEVAUCHEZ (A.). Les caisses d'épargne en France. Histoire et législation. Paris: Chevallier et Rivière. 1905. 8vo.

CONANT (C. A.). Principles of Money and Banking. 2 vols. New York: Harper. 1905. 8vo. pp. 437, 487. \$4.00 net.

[A comprehensive work, including monetary history and theory in the first volume, and the principles of banking, its evolution, and studies of the money markets and crises in the second.]

DOLLEANS (E.). La monnaie et les prix. Paris: Larose. 1905. 8vo. pp. 132.

[Extrait des questions monétaires contemporaines. Attempts to test the quantity theory by statistics of the monetary supply and the volume of transactions, with the obvious conclusion that the influence of the quantity of money

is neither exclusive nor measurable.]

JEIDELS (O.). Das Verhältnis der deutschen Grossbanken zur Industrie, mit bes. Berücks. der Eisenindustrie. Leipzig: Duncker & Humblot. 1905. 8vo. pp. 233. 6 m.

[In Schmoller's Forschungen.]

KIRKBRIDE (F. B.) and STERETT (J. E.). The Modern Trust Company: Its Functions and Organization. New York: Macmillan. 1905. 8vo. pp. 309. \$2.50.

[A study of the details of organization, the functions of the various officials, methods of accounting, etc. No attention to the larger aspects.]

KNAPP (G. F.). Staatliche Theorie des Geldes. Leipzig: Duncker & Humblot. 8vo. pp. 408. 8.40 m.

[A theoretic inquiry, with new-coined technical terms so numerous as to occasion a separate index for them. I. Money and Metals: "platische, genetische, dromische Beziehungen." II. Internal Organization: Bimetallism and Standards, "akzessorisches Geld." III. International Transactions: "intervalutarischer kurs," "exodromische Verwaltung," "fester kurs als letzter Ziel." IV. Survey of the Situation in the Different Countries.]

RIESSER. Zur Entwicklungsgeschichte der deutschen Grossbanken mit bes. Rücks. auf die Konzentrationsbestrebungen. Jena: G. Fischer. 1905. 8vo. pp. 294. 7 m.

TERREL (H.) et LEJEUNE (H.). Traité des opérations commerciales de banque. Paris: Masson. 1905. 8vo. pp. 567. 8 fr.

WILDMAN (M. S.). Money Inflation in the United States: A Study in Social Pathology. New York:

- G. P. Putnam's Sons. 1905. 12mo. pp. 238.
[A study of the psychological, economic, and social conditions which have led to inflation movements in the United States.]
- WOLFF (J.). Die argentinische Währungsreform von 1899. Leipzig: Duncker & Humblot. 1905. 8vo. pp. 147. 3.40 m.
[In Schmoller's Forschungen.]
- In Periodicals.*
- CONANT (C. A.). The Concentration of Financial Power. Intern. Quart., Oct., 1905.
- FARWELL (J. V.). George Smith's Bank. Journ. Polit. Econ., Sept., 1905.
- GIBSON (Thomas). Dangerous Cotton Speculation. Moody's Mag., Jan.
- GOLODETZ (M.). Staatsaufsicht über die Hypothekenbanken. II. Jahrb. f. Gesetzg., 1905, Heft 4.
- HEISS (C.). Das Währungswesen in China, auf den Philippinen, in Panama und anderen Silberwährungsländern. Jahrb. f. Gesetzg., 1905, Heft 4. [A summary of the 1904 report of the Commission on International Exchange.]
- SCHACHNER (R.). Kritik der deutschen Sparkassenstatistiken. Jahrb. f. Nat. Oek., Nov.
- SCHACHNER (R.). Kritik des Scherischen Prämien-Sparsystems. Archiv f. Sozialw., Vol. 21, Heft 1.
- . Kritik des Sparkassenwesens deutscher Selbstverwaltungskörper. Archiv f. Sozialw., Vol. 21, Heft 1.
- SPEISER (W.). La banque nationale suisse. Rev. Econ. Intern., Dec.
- THORWART (F.). Un coup d'œil sur le marché monétaire en Allemagne. Rev. Econ. Intern., Oct. [A review of the growth and relations of Germany's banking system.]
- WARSCHAUER (O.). Die Reform des Börsengesetzes in Deutschland. Jahrb. f. Nat. Oek., Oct.
- WHITE (Horace) and OTHERS. Symposium on the Increased Supply of Gold. Moody's Mag., Dec., 1905. [Other contributors are J. B. Clark, Irving Fisher, M. L. Muhleman, W. S. Logan, F. A. Vanderlip, E. H. Roberts, J. De W. Warner, C. A. Conant, J. F. Johnson, L. C. Root, R. Goodby, J. R. Branch, and G. H. Shipley. Contains a great deal that is good—and some nonsense.]
- WOLFF (H. W.). An Unconsidered Factor in the Industrial Problem,—British and Foreign Banking. Econ. Rev., Oct., 1905.

IX. FINANCE AND TAXATION.

- COLSON (C.). Cours d'économie politique. Tome III. Les finances publiques et le budget de la France. Paris: Gauthiers-Villars. 1905. 8vo. pp. 442. 6 fr.
- HELFFERICH (K.). Das Geld im russisch-japanischen Kriege. Ein finanzpolitischer Beitrag. Berlin: E. S. Mittler. 1906. 8vo. pp. 249. 4.50 m.
[The author is professor at Berlin.]
- HOFFMAN (A.). Die direkten Staatssteuern im Königtum Sachsen, mit bes. Berücks. der Einkommensteuer, geschichtlich und kritisch dargestellt. Leipzig: Jäh & Schünke. 1906. 8vo. pp. 238. 5 m.
- LEBOY-BEAULIEU (Paul). La science des finances. Septième édition refondue et augmentée. Paris: Guillaumin. 1905. 8vo. 2 vols. 25 fr.
- MARTIN (R.). Die Zukunft Russlands und Japans. Berlin: C. Heymann. 1905. 8vo. pp. 268. 4 m.
[A pessimistic account of Russia's finances, alleging danger of bankruptcy.]
- NEYMARCK (A.). Finances contemporaines. Tome III. Questions économiques et financières 1872-1904. Paris: Guillaumin. 1905. 8vo. 10 fr.
[The earlier volumes were: I.

- Trente années financières 1872-1901. II. Les budgets 1872-1903.]
NINA. La teoria del lotto di stato. Turin: Bocca. 8vo. 1905.
 [A careful critical examination of the lottery system, defence of it as a state institution (chiefly on fiscal grounds), suggestions as to eventual abolition.]
STEINITZER (Erwin). Die jüngsten Reformen der veranlagten Steuern in Oesterreich. Histor. kritische Studie. Leipzig: Duncker & Humblot. 1905. 8vo. pp. 215. 4.60 m.
 [A prize essay at the University of Munich.]
- In Periodicals.*
- AVEBURY (Lord).** The Excessive National Expenditure. Nineteenth Cent., Nov., 1905.
BROOKS (R. C.). Berlin's Tax Problem. Pol. Sci. Quart., Dec.
 [An instructive account of the consequences of the legislation of 1893, the limited revenue from direct taxes, the failure of the movement to tax increasing site values.]
KEATAR (C. E.). Why Industrial Alcohol should be Free. Moody's Mag., Jan.
MEYER (H.). Pierre Merlon und seine Stellung zur bevorstehenden Steuerreform in Frankreich. Jahrb. f. Nat. Oek., Sept.
 [A statement as to the present French finance minister's previous projects for the introduction of an income tax.]
TORLONIA (C.). I debiti dei comuni e delle provincie. Giorn. degli Econ., Oct.
 [The administration of Italian municipal and provincial finance demands reform, but the amount of local debt is somewhat diminishing.]
WHITING (F. J.). The Breakdown of the Russian Financial System. Moody's Mag., Jan.

X. CAPITAL AND ITS ORGANIZATION: COMBINATIONS.

- CELLÉBIER (L.).** Étude sur les sociétés anonymes en France et dans les pays voisins. Paris: Larose. 1905. 8vo. 9 fr.
DAVIES (D. H.). Cost of Municipal Trading. London: P. S. King & Son. 8vo. 2s.
DAVIS (J. P.). Corporations: Their Origin and Development. New York: Putnam's, 1905. \$4.50.
 [A convenient general summary. Displays little evidence of original research.]
DAWSON (M. M.). The Business of Life Insurance. New York: A. S. Barnes & Co.
 [An excellent work designed for the general public. Deals frankly and honestly with the abuses of life insurance, and is altogether the best recent treatise on the subject.]
ETTINGER (M.). The Regelung des Wettbewerbs im modernen Wirtschaftssystem. I Teil: Die Kartelle in Oesterreich. Eine orientirende Darstellung. Vienna: Manz. 1905. 8vo. pp. lx, 267. 6.80 m.
 [Professor K. Menger contributes an elaborate preface.]
HIRST (F. W.). Monopolies, Trusts and Kartells. London: Methuen. 8vo. 2s. 6d.
LEMAIRE (F.). La concession de services publics. Étude théorique et pratique. Liège: Poncelet, 1905. 8vo.
TENERELLI (F. G.). La municipalisation du pain. Étude sur les boulangeries municipales de Catane et de Palerme. Paris: Giard et Brière. 1905. 8vo. 2 fr.
UNSIGNÉD. Denkschrift über das Kartellwesen. Berlin: C. Heymann. 1906. 8vo 13 m.
 [Announced. A report prepared by the Ministry of the Interior.]
 ———. Comune di Venezia: Provvedimenti per il servizio diretto del gas. Relazione della Giunta

- a. Consiglio municipale. Venice: C. Ferrari. 1905.
[A noteworthy report on a municipal undertaking.]
- In Periodicals.*
- ANDERSON L. A. Competition in Life Insurance. *Yale Rev.*, Nov., 1905.
- BACHI (R.). La contabilità delle municipalizzazioni: di piccoli servizi. *Giorn. degli Econ.*, Nov. [Emphasizes the importance of proper accounting to show profit and loss in municipal trading.]
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- DARROW (C. S.). The Chicago Traction Question. *Intern. Quart.*, Oct., 1905.
- GOTHEIN (E.). Die Konzentration im Kohlenbergbau und das preussische Berggesetz. *Archiv f. Sozialw.*, Vol. 21, Heft 2.
- HELLER (V.). Ein Kartellverbot in Oesterreich. *Jahrb. f. Nat. Oek.*, Sept. [Proposed legislation against the pressure exerted by the sugar Kartell upon the sugar-beet growers.]
- HESSE (A.). Die Handelsgesellschaften in Japan. *Jahrb. f. Nat. Oek.*, Oct.
- JARACH (C.). Lo sviluppo ed i profitti delle società per azioni italiane dal 1882 al 1903. *Riforma Soc.*, Sept.-Oct. [An excellent example of economic laboratory method from the University of Turin.]
- . La distribuzione topografica delle società per azioni italiane e l'incremento relativo della piccola e grande industria. *Riforma Soc.*, Dec.
- KATZENSTEIN (L.). Die Warenhausfrage. *Jahrb. f. Nat. Oek.*, Sept., Oct.
- MEYER (H. R.). Municipal Ownership in Great Britain. *Journ. Polit. Econ.*, Sept., 1905. [An unfavorable showing for municipal ownership.]
- SCHMOLLER (G.). Das Verhältnis der Kartelle zum Staate. *Jahrb. f. Gesetzg.*, 1905, Heft 4. [An address at the September meeting of the Verein für Socialpolitik. It proposes the regulation of the movement toward industrial consolidation by government representation upon the directing boards of the great companies and by division with the state of all profits above 10 per cent.]
- WHITNEY (E. B.). Public Ownership in New York. *Intern. Quart.*, Oct., 1905.

XI. ECONOMIC HISTORY.

- CABO (G.). Beiträge zur älteren deutschen Wirtschafts- und Verfassungsgeschichte. Leipzig: Veit & Co. 1905. 3.50 m.
- CASTAGNERI (E.). Sulla persistenza dei "Collegia" romani nelle corporazioni d'arti e mestieri medievali. Turin: Bona. 1905.
- CLAVARI (L.) and SEVERINO (A.). La vita della posta nella leggenda, nella storia e nell'attività umana. Bari: Gius. Laterza e figli. 1905. 8vo. pp. 399. 5 l.
- COLLETTE (E.). Les foires et marchés à Dijon. Dijon. 1905. 8vo. pp. 107.
- CROMBE (J.). Organisation du travail à Roubaix du quinzième siècle à la Révolution. Lille: Camille Robert. 1905. 8vo. pp. 134.
- EHRENBERG (R.). Grosse Ver-
- mögen, ihre Entstehung und Bedeutung. Band I.: Die Fugger-Rothschild-Krupp. 2 ergänzte Auflage. Jena: G. Fischer. 1905. 8vo. pp. 221. 3 m.
- ELLIS (Ellen D.). An Introduction to the History of Sugar as a Commodity. Philadelphia: John C. Winston Co. 1905. 8vo. pp. 117. [In Bryn Mawr College Monographs. Traces industriously the history of sugar to the close of the 17th century.]
- FLAMM (H.). Der wirtsch. Niedergang Freiburgs, und die Lage der städtischen Grundeigentums in 14-15 Jahrhunderte. Karlsruhe: G. Braun. 1905. 8vo. pp. 187. 3.20 m.
[In Volksw. Abhandlungen der badischen Hochschulen.]

- GILLIODTS VAN SEVEREN (L.). Cartulaire de l'ancienne estaple de Bruges. Recueil de documents concernant le commerce intérieur et maritime, les relations internationales et l'histoire économique de cette ville. 2 vols. Bruges: L. de Planche. 1904, 1905. 8vo. pp. 747, 744. 30 fr.
- GOMEL (C.). Histoire financière de la Législative et de la Convention. Vol. II. Paris: 1905.
[The first volume of this excellent work appeared in 1903.]
- GRAY (B. K.). A History of English Philanthropy from the Dissolution of the Monasteries to the Taking of the First Census. London: P. S. King & Son. 1905. 8vo. pp. 300. 7s. 6d.
[A brief but scholarly history of English philanthropy from the dissolution of the monasteries to the end of the 18th century.]
- HECK (P.). Beiträge zur Geschichte der Stände im Mittelalter. II. Der Sachsenspiegel und die Stände der Freien. Halle: M. Niemeyer. 1905. 8vo. pp. 888. 22 m.
- HEYSEN (R.). Zur Entstehung des Kapitalismus in Venedig. Stuttgart: Cotta. 1905. 8vo. pp. 136. 3 m.
[In Münchener Volksw. Studien.]
- HINOJOSO (E. de). El regimen señorial y la cuestión agraria en Cataluña durante la edad media. Madrid: de Fortanet. 1905. 8vo. pp. 395. 7.50 p.
- HOCHSTETTER (F.). Die wirthsch. und polit. Motive für Abschaffung des britischen Sklavenhandels in 1806-1807. Leipzig: Duncker & Humblot. 8vo. pp. 130. 3 m.
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- LE CACHEUX (P., editor). Le livre de comptes de Thomas Du Marest, curé de Saint Nicolas de Coutances (1397-1433). (Soc. de l'hist. de Normandie.) Paris: Picard et fils. 1905. 8vo. pp. 280.
- LONCAO (E.). Stato, chiesa e famiglia in Sicilia dalla caduta dell' impero romano al regno normanno. I. Le invasioni vandaliche e il regno dei Goti: Studi di economia e diritto. Palermo: A. Reber. 1905. 8vo. pp. 129. 4 l.
- MANTOUX (P.). Le révolution industrielle au XVIII^e siècle. Essai sur les commencements de la grande industrie moderne en Angleterre. Paris: Bellais. 1906. 8vo. pp. 550. 10 fr.
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- NAGAOKA (M. H.). Histoire des relations du Japon avec l'Europe aux XVI^e et XVII^e siècles. Paris: Jouve. 1905. 8vo.
- NYBOP (C., editor). Danmark's Gildes og Lavskræser fra Middelalderen. Vols. I., II. Copenhagen: G. E. C. Gad. 1899, 1904.
[An important contribution to the materials for gild history.]
- SERRES (B. de). Recherches sur divers services publics du XIII^e au XVII^e siècle. II. Notices relatives au XIV^e siècle. Paris: Alphonse Picard et fils. 1904. 10 fr.
[A valuable contribution to the financial history of France. The first volume, dealing with the 13th century, appeared in 1895.]
- WECKERLIN (J. B.). Le drap "es-carlate" au moyen âge. Lyon. 1905. 8vo. 6 fr.

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- AFTALION (A.). Le développement de la fabrique et le travail à domicile dans les industries de l'habillement. Rev. d'Econ. Pol., Oct.-Nov.-Dec.
- CLARK (A.). Serfdom on an Essex Manor (1308-1378). Eng. Hist. Rev., July.
- GÖLLER (E.). Der Liber Taxarum der päpstlichen Kammer: eine Studie über seine Entstehung und Anlage. Quellen und Forschungen aus italienischen Archiven und Bibliotheken, Vol. VIII., Heft 1 and 2.
- HOLZAPFEL (H.). Le origini dei monti di pietà (1462-1515). La Verna, 1905 (a Franciscan periodical).
- JENSEN (O.). The "Denarius Sancti Petri" in England. Transactions of the Royal Historical Society, Vol. XIX., 1905.

- LEONARD (Miss E. M.). The Inclosure of Common Fields in the Seventeenth Century. Transactions of the Royal Historical Society, Vol. XIX., 1905. [Contributes some new material to the subject, but no new point of view.]
- MAHAIM (E.). Les débuts de l'établissement John Cockerill à Seraing. I. Vierteljahrschr. f. Soc.- u. Wirtschaftsgeschichte, 1905, Heft 4. [Touches a phase of the Industrial Revolution on the Continent.]
- MALDEN (H. E.). Bondmen in Surrey under the Tudors. Transactions of the Royal Historical Society, Vol. XIX., 1905.
- MIROT (L.). Le rétablissement des aldes en 1382-1383. Rev. des Quest. Hist., April, July.
- MÜLLER (J.). Das Rodwesen Bayerns und Tirols im Spätmittelalter und zu Beginn der Neuzeit. II. Vierteljahrschr. f. Soc.- u. Wirtschaftsgeschichte, 1905, Heft 4. [A contribution to the history of transportation between Germany and Italy.]
- OTTO (W.). Aus der Gesellschaftsgeschichte des Altertums. Zeitschr. f. Socialw., Nov., Dec. [A critical survey of the third volume of Beloch's Greek History.]
- PEISKER (J.). Die älteren Beziehungen der Slawen zu Turkotaren und Germanen und ihre sozial-geschichtliche Bedeutung. Vierteljahrschr. f. Soc.- u. Wirtschaftsgeschichte, 1905, Heft 4. [Concluding section of a suggestive paper.]
- PUDOR (H.). Die Geschichte der Kornhausgenossenschaften in Portugal. Jahrb. f. Nat. Oek., Sept. [Based upon Luiz de Castro, Le Portugal au point de vue agricole, 1900.]
- SEELIGER (G.). Forschungen zur Geschichte der Grundherrschaft im früheren Mittelalter. Hist. Vierteljahrschrift, 1905, Heft 3.
- VINOGRADOFF (P.). Zur Wergeldfrage. Vierteljahrschr. f. Soc.- u. Wirtschaftsgeschichte, 1905, Heft 4.
- WEBER (M.). Die protestantische Ethik und der "Geist" des Kapitalismus. II. Die Berufsidee des asketischen Protestantismus. Archiv f. Sozialw., Vol. 21, Heft 1. [An interesting and suggestive contribution to the inner history of modern capitalism.]

XII. DESCRIPTION OF INDUSTRIES AND RESOURCES.

- ANADOLI. L'empire du travail. La vie aux États-Unis. Paris: Plon-Nourrit. 1905. 16mo. pp. 296. 3.50 fr.
- GANNETT (H.) and OTHERS. Commercial Geography. New York: American Book Co. 1905. 12mo. pp. 412. [A serviceable elementary text, of the usual type.]
- HORNUNG (E.). Entwicklung und Niedergang der hannoverschen Leinwandindustrie. Hanover: Helwing. 1905. 8vo. pp. 154. 4 m.
- LEGIER (E.). La Martinique et la Guadeloupe. Considérations économiques sur l'avenir de la culture de la canne. Paris: Challamel. 1905. 8vo. 6 fr.
- LEROY-BEAULIEU (Pierre). The United States in the Twentieth Century. Translated by H. Adington Bruce. New York: Funk & Wagnalls. 1905. 8vo. pp. 396. [A good translation of this useful work.]
- LEVY (H.). Die Stahlindustrie in den Vereinigten Staaten in ihren heutigen Produktions- und Absatzverhältnissen. Berlin: J. Springer. 8vo. pp. 372. 7 m. [A thorough monograph: the author is Dozent at Halle. A sketch of the history of the iron industry is followed by an elaborate account of its present state, cost of production, the Steel Corporation, and especially the Steel Rail, Tin Plate, and Wire combinations. The author looks forward to an increase of the exports of crude iron and steel from the United States.]
- PAASCHE (H.). Die Zuckerproduktion der Welt. Ihre wirthsch.

Bedeutung und staatliche Belastung. Leipzig: Teubner. 1906. 8vo. pp. 342. 7.40 m.

[In Teubner's series Handbücher für Handel und Gewerbe.]

RAUCHBERG (H.). Der nationale Besitzstand in Böhmen. Leipzig: Duncker & Humblot. 3 vols. 8vo. pp. 717, 427, 25. 28 m.

[An elaborate inquiry on the present situation as between Germans and Czechs in Bohemia; largely on questions of population, but also on occupations, land ownership, wages. Vol. I. contains the text, Vol. II. statistical tables, Vol. III. charts and diagrams.]

STEINMANN (A.). Die ostschweizerische Stickerel-Industrie. Volksw.-soziale Studie. Zürich: E. Rascher. 1905. 8vo. pp. 216. 3.50 m.

[In Züricher Volksw. Studien, edited by H. Herkner.]

THERY (Ed.). La Grèce actuelle au point de vue économique et financier. Paris: Rey. 1905. 18mo. 3.50 fr.

WOLFF (H.). Der Spessart. Sein Wirtschaftsleben. Mit Tabellen und einer Spessartkarte. Aschaffenburg: C. Krebs. 1905. 8vo. pp. 493. 16 m.

[An elaborate description of the Spessart region in Western Germany.]

UNDESIGNED. Der deutsche Kaufmann. Leipzig: B. G. Teubner. 1905. 8vo. 8 m.

[An elaborate manual for business men, on the co-operative plan, fathered by the German Verband für das kaufmännische Unternehmensewesen. The several sections, by various writers, treat of the economic geography and economic history of Germany, establishment and management of a business, book-keeping, money and credit, transportation and freights, business law, insurance, taxation. There is a full index.]

Der deutsche Grosskaufmann. Leipzig: B. G. Teubner. 1905. 8vo. 8 m.

[A manual, like the preceding, for wholesale dealers, containing sections, by different hands, on fundamental principles of eco-

nomics, economic geography of leading countries, international trade and foreign exchange, transportation between countries, customs duties, and the like.]

Handbuch der Wirtschaftskunde Deutschlands. Leipzig: B. G. Teubner. 1901-04. 4 vols. 8vo.

[In connection with the preceding, we note this older series, published in 1901-04, on the same general subject of commercial education and information. Vol. I., Die Wirtschaftlichen Grundlagen, pp. 339, 10 m. Vol. II., Die land- und forstwirtschaftlichen Gewerbe, pp. 259, 6 m. Vol. III., Die Hauptindustrien, pp. 1059, 30 m. Vol. IV., Handel und Verkehr, pp. 756, 13 m. Maps are in all the volumes.]

In Periodicals.

BERNAT (Et.). Le développement économique et politique de la Hongrie. Rev. Econ. Intern., Oct.

CATTIER (S.). La Belgique au début du XX^e siècle. Rev. Econ. Intern., Dec. [A rather pessimistic forecast by a Belgian engineer of the coming exhaustion of the Belgian mines, and of decline in other economic fields.]

DANNENBERG (A.). Kohle und Kohlenversorgung "im fernen Osten." Jahrb. f. Nat. Oek., Nov.

EPHRAIM (H.). Organisation und Betrieb einer Tuchfabrik. Zeitschr. f. d. ges. Staatsw., 1905, Heft 4.

GOTHEIN (G.). Die preussischen Bergesetznovellen. Archiv f. Sozialw., Vol. 21, Heft 1.

LIEFMANN (R.). Zur heutigen Lage der deutschen Grossisenindustrie. Jahrb. f. Nat. Oek., Nov.

SHALEH (N. S.). The Exhaustion of the World's Metals. Intern. Quart., July, 1905.

VOGEL (F.). Die wirtschaftliche Bedeutung deutscher Gebirgswasserkraft. Zeitschr. f. Sozialw., Oct. [A brief proposal that the state should control and utilize the mountain water-supply for industrial purposes, especially for electrical power in its railroad system.]

XIII. STATISTICAL THEORY AND PRACTICE

BUFF (F.). Reference Book for Statistical Calculations. Vol. I. London: Spott. 5s.

In Periodicals.

COLETTI (F.). Piano di elaborazione di una statistica dei salari. *Giorn. degli Econ.*, Oct., Nov. Describes the excellent method followed by the Labor Bureau of the Humanitarian Society in taking a wage census of Milan.]

ROSENBAUM (S.). Vital and Other Statistics of Jews in the United

Kingdom. *Journ. Roy. Statist. Soc.*, Sept. 30.

WILLIS (H. P.). Cotton and Crop Reporting. *Journ. Polit. Econ.*, Sept., 1905. [Suggests needed reforms in method of crop reporting.]

ZIMMERMAN (F. W. R.). Zur Frage der Besitzwechsel-, Hypothekar-, sowie Bodenpreis- und Bodenwertstatistik. IV. Verwendbarkeit der Enquete als Ersatz oder neben der Statistik auf den fraglichen Gebieten. *Zeitschr. f. d. ges. Staatsw.*, 1905, Heft 4.

XIV. NOT CLASSIFIED.

BIGELOW (M. M.) and OTHERS. Centralization and the Law. Boston: Little, Brown & Co. 1903. 12mo. pp. 296.

[Of interest to economists as well as to lawyers. Holds that law is "the expression, more or less deflected by opposition, of the dominant force in society"; and illustrates this thesis by reference to the labor problem, monopolies and railroads.]

CHAPMAN (S. J.). The Cotton Industry and Trade. London: Methuen. 8vo. 2s. 6d.

COBB (B. F.). Business Philosophy. New York: T. Y. Crowell & Co. \$1.20.

DITTE (P.). La législation des débits de boissons et les projets de réforme. Paris: Rousseau. 1905. 8vo. pp. 168. 3 fr.

GRUNZEL (J.). System der Industriepolitik. Leipzig: Duncker & Humblot. 1905. 8vo. pp. 396. 8 m.

[Covers a wide range of topics: history and development of manufactures, trusts and combinations, public management, care for workmen, industrial education, museums and expositions, fostering of industries by the states, etc. The author is an official in the Austrian ministry of Commerce.]

HOWE (F. C.). The City: The Hope

of Democracy. New York: Scribner. 1905. 12mo. pp. 319. \$1.50.

[An optimistic study of the various problems of city life. Advocates the single tax, public ownership of municipal monopolies, etc.]

JOHNSTON (A.). American Political History, 1763-1876. Edited by J. A. Woodburn. Vol. I. 1763-1832. New York: Putnam's. 1905. 8vo. pp. 446.

[A reprint of Johnston's various articles in Labor's Cyclopaedia, with W. C. Ford's article on American tariffs and additions by the editor.]

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THE
QUARTERLY JOURNAL
OF
ECONOMICS

MAY, 1906

THE INFLUENCE OF THE CROPS UPON BUSINESS IN AMERICA.

FLUCTUATIONS in business prosperity result from a wide assortment of causes. They are variously attributed to epidemic states of mind, to changes in legislation, to the development of new industrial processes, to the opening of new trade routes, to excesses in banking, or, again, to changes in the methods of industrial organization. With all of these factors, men may, by taking thought, foresee in some degree their movement, and in some measure may control their outcome. Business welfare in every community depends, however, very largely upon another set of factors, whose caprices none can predict and none can govern,—factors which are closely connected with conditions of weather and of temperature. As there is no country where agriculture is not pursued or where agricultural products are not used either as foodstuffs or as raw materials, there is no country where the chance conditions

of weather are not of vital consequence. Nor is the influence of the harvests confined solely to agricultural areas and occupations. It reaches far beyond the fields. It affects manufacturing and transportation interests, banking and foreign trade, and is responsible for many of the larger deviations in commercial prosperity.

The product of agriculture differs from the output of all other branches of production in being so largely independent of human regulation and so little adjustable in amount to demand. This results not merely from the dependence of the harvests upon meteorologic conditions, over which man obviously has neither control nor prophetic vision, but also from the fact that the agricultural output is in most cases produced by a far greater number of disconnected individuals. The several crops are grown upon a countless number of widely scattered farms, the owners of which in each case are of necessity ignorant for the most part of the intentions and operations of other producers. Even were there no uncertainties of weather to contend against, there would still be serious and unforeseeable maladjustments of supply because of the inability of individual producers to gauge the total output,—an inability which is obviously more marked in the case of agriculture than in either mining or manufacture.

In the following paper we shall study the influence of this peculiarly fortuitous factor upon general business, and attempt to measure the extent of its responsibility for the advances and reverses of trade in America during the past thirty or forty years.

I.

One can easily discern four or five important ways in which general business conditions are likely to be affected by the success or failure of the crops.

(1) In the first place the size of the crops exerts a considerable influence over the community's power to purchase other goods. If the season has been successful, the farmer is almost sure to increase his expenditures, and use at least a part of his new earnings. He may build an addition to his house or erect a new barn, or he may purchase a piano or a new buggy or new house furnishings or new clothes for himself and his family. Even if he does not use all of the additions to his income himself, but deposits some of them in the banks, they will none the less help to swell the market for other goods in the hands of other customers of the bank. If, further, on account of a plentiful harvest, the prices of food and of certain sorts of clothing are reduced, another result to be expected is that people in general outside of agricultural pursuits will have more to spend upon other things. A bountiful harvest is thus significant for almost all of the occupations in a community. It involves an immediate expansion of the demand for the most varied sorts of merchandise, and the economic machine in most of its branches is apt to be stimulated to some extent through increased consumption. On the other hand, when the agricultural output fails, the farming population is at once obliged to retrench, to forego contemplated improvements in their farms, to curtail many of the usual or expected expenditures, perhaps even to withdraw deposits from banks, and so abridge the working capital of others. If, too, the prices of breadstuffs and meats rise, many of the rest of the community will have to devote a part of what they are accustomed to spend upon other things to the purchase of food. They will have to abstain from some of their usual purchases in order to buy these necessities of life. At such times, then, not only will the industries which produce primarily for the farmers feel the pinch of reduced consumption, but other industries as well, which produce objects that in ordinary

times are consumed by the masses of men. The clothing trades, for example, may be expected to feel the difference, and the liquor, tobacco, and other similar occupations are also likely to be affected.

(2) In the second place the very solvency of a large part of the agricultural population, and of those connected by business relations with them, depends to a considerable degree upon the outcome of the year's harvest. Whether or not the farmer will be able to repay loans which he has contracted, whether or not he will be able to settle his bills with tradesmen and dealers, and whether or not he can pay for his agricultural machinery and farm improvements, will in many cases be decided by the size of the crop. If the crop fails, his various creditors, the banker who has lent him money, the mortgagee of his farm, the shopkeepers from whom he has bought his supplies, and any others to whom he is indebted will either have to wait, or, if they force a settlement, will not improbably suffer losses. If these delinquencies occur upon too wide a scale, the failure in agriculture may be propagated into other fields, and bankruptcies among bankers, dealers, and manufacturers may ensue. If the harvest, on the other hand, is good, and can be marketed at profitable prices, the capital of the affiliated creditors will once more be set free and made ready for new activities.

(3) In the third place, in a country where agricultural products form an important factor in the foreign commerce, the size of the crops will exert a considerable influence upon the balance of trade and the international movement of gold. The extent of the bank reserves in the great financial centres and the contraction or expansion of general credit may in consequence depend most importantly upon the output of the season's harvests. This consideration is of peculiar concern in the United States, where until quite recently two-thirds or more of the total

exports have consisted of such produce.¹ When the American crops are abundant, our exports very naturally tend to increase, and gold imports are apt to occur. That in turn means large cash holdings in the banks, with, under normal conditions, the accompaniments of expanding credit and buoyant trade. When, on the other hand, the crops fail, the movement of exports and of gold swings in the contrary direction, and in that event we are apt to be confronted with dwindling bank reserves, a contingent contraction of the general credit, declining business, and less activity in trade.

(4) Again, the size of such crops as are not consumed in the locality of their production is of great significance for the transportation interests. One has only to observe the fluctuations in railway earnings month by month during the course of any normal year to realize how important a factor the harvests are in railway affairs. It is in the months of the harvests, from August to December, that railway traffic and railway earnings normally reach their highest levels, the earnings not unfrequently being thirty to 40 per cent. higher in September or October than in May or June. A bumper crop in the case of a commodity like wheat, which is so largely consumed at a long distance from the place of its production, is consequently a source of great profit to the railroads concerned, while a poor crop means diminished traffic and reduced earnings.

(5) Finally, the success or failure of certain crops is also of significance for those industries into which the crop

¹ Year.	Exports of agri- cultural prod- ucts, per cent. of total exports. Per cent.	Year.	Exports of agri- cultural prod- ucts, per cent. of total exports. Per cent.
1890	74.51	1898	70.54
1891	73.69	1899	65.19
1892	78.60	1900	60.98
1893	74.05	1901	64.62
1894	72.28	1902	62.83
1895	69.73	1903	62.73
1896	66.02	1904	59.48
1897	66.23	1905	55.03

enters as a raw material. A failure of the wheat crop will obviously depress the milling industry, and a failure of the cotton crop will curtail the earnings of the cotton factories, not only those in the vicinity of the cotton-growing States, but those in New or old England as well. A failure of the corn crop similarly will diminish the profits of cattle raising, may work injury to the packing interests, and to some extent may affect also the distillers of whiskey.

There are, then, five important ways in which the conditions of agriculture are likely to influence general business: (1) by affecting the community's consumption of other goods; (2) by affecting the solvency and credit of farmers and those engaged in dealings with them; (3) by affecting the balance of trade and the bank reserves; (4) by affecting transportation interests; (5) by affecting manufacturing interests for which the agricultural product is a raw material.

Obviously, the greater the proportion of the population of a country that is engaged in agriculture, the more severely the country will be affected by a sudden fluctuation in the crops; and, as so large a proportion of the American people are occupied with agricultural pursuits, we should naturally expect the condition of the crops to be of greater influence upon trade conditions in this than in many other countries. Those who live in the large cities or are familiar only with such infertile regions as the Atlantic seaboard are apt to forget that we are still very largely an agricultural people. According to the census of 1900, out of a total of twenty-nine million persons reckoned as gainfully occupied, more than ten millions were engaged in agricultural pursuits. That is to say, more than one-third of those engaged in gainful occupations were connected with farming of one or another sort. We should naturally expect, then, the output of agriculture to be of peculiarly intimate and conspicuous influence upon general business conditions in the United States.

II.

At the same time there are, needless to say, other factors than the output of our farms which may affect our prosperity, and whose influence may quite outweigh the influence of our harvests.

(1) First, it will be noted that in the case of those agricultural products which belong in large degree to foreign trade the financial success or failure of the harvest in any given locality depends to some extent upon the output of the same product elsewhere. An unusually large harvest in this country, if accompanied by small harvests abroad, obviously means prosperity for the American farmers, means large exports and high prices, tends to mean incoming gold and expanding credit. But, if accompanied by excessive crops abroad and flagging demand, it means, on the other hand, extraordinarily low prices, diminished exports, and depression in agriculture, if not in general trade. We have examples of each of these situations in the period centering about 1880. In 1879 the wheat crop, the corn crop, and the cotton crop were all the greatest ever known in our history up to that time. But in England and Europe the wheat crop was a failure on account of excessive rain and cold, and in India the cotton crop was a partial failure. We had then the conditions which would naturally result in prosperity for agriculture and flourishing trade. In 1880 these conditions were repeated. All three of these crops in America exceeded even the levels of 1879, and the foreign crops again ran short. There resulted, as every one knows, a business development rapid beyond all parallels in our previous commercial history. But note the situation only two years later. The American wheat and cotton crops in 1882 exceeded even the record-breaking totals of 1880, and the corn crop was the largest, with one exception, in our history. But in that year the

countries of Europe also produced the greatest total wheat output in their history. The price of wheat in America accordingly fell, and the amount exported was strikingly diminished. The market for cotton also proved to be overstocked, and the price of cotton likewise underwent a serious decline. There was no new development of business, no great revival of prosperity after the harvests of 1882. Although the crops of wheat and cotton were the most abundant that America had ever known, the following year was one of "steadily increasing depression." So also two years later, in 1884, the American wheat and corn crops once more bulked larger than ever. All previous records for their size were broken; but here again the records of the rest of the world for output were also broken, and the price of wheat in consequence declined to the lowest level it had yet touched during the century, and the value of the total crop in the end proved less than it had been in any year since 1878. The agricultural output in America in 1884, as in 1882, would have led one to expect a fresh outburst of general activity, but the movement in the latter case as in the former was checked by the concurrent abundance abroad, and the year that followed in each case remained one of marked depression.

(2) In the second place, even where the country is blessed with the desired conjunction of domestic crop abundance and foreign crop failures, the revival of business activity may be prevented by the operation of other influences.

In 1891 the wheat crop failed everywhere in Europe, and this occurred on the top of two serious harvest shortages in 1889 and 1890. At the same time the American crop proved larger than ever,—proved larger, in fact, by one hundred million bushels than the record crop before that date. The export of grain ran even beyond the enormous exports of 1879 and 1880, and reached in the ensuing year the highest level ever known before or since. The

cotton fields also turned out by far the largest crop on record up to that time, and our exports of cotton exceeded all precedents. The corn crop was also abundant, being, with one exception, the largest ever harvested. And yet, with all these favoring conditions, with bumper crops in all lines in this country and scant crops abroad, with record-breaking shipments of wheat and cotton, with the heaviest export trade ever known in the history of our country, and the most favorable balance of trade in a decade, there was no extraordinary outburst of activity in general trade, no such expansion of business as had occurred a dozen years before under similar circumstances. No matter what we select as a gauge of prosperity, we find the same evidence of a relatively slack development in the early nineties, as compared with either the upward movement of the early eighties or that of a decade later. We may take the statistics of the per capita foreign trade, or the railway earnings per mile, or the bank clearings, or the stock exchange transactions, or the prices of commodities and securities, and we find them all telling the same story. The maximal records of the period all fell far short of those of the preceding or those of the succeeding cycle of trade. The continued agitation of the silver question and the dwindling reserves of the Treasury, presenting as they did an ominous outlook for our monetary standard, sufficed to prevent any considerable improvement in domestic trade and manufactures, such as otherwise would have resulted from the bountiful harvests and the immense export trade. American securities held abroad began to be returned in such quantities as to counteract what would naturally have been an enormously favorable balance of indebtedness; and American investors themselves hesitated from risking capital so long as Congress could not be depended upon to maintain the value of the country's money. There was no season of buoyant activity in 1891

and 1892. Trade continued sluggish. Congress had cast a deadening blight over business which even the plenteous bounty of nature was unable to overcome.

(3) A third fact is to be noted in discussing the relations of the crops to economic cycles in a country which, like the United States, ranges over a very extensive and diversified territory, and produces in different regions several very different crops. These various crops—belonging, as they do, to different latitudes and soils, subject to very unlike conditions of weather and temperature—are by no means bound to stand or fall together. An unusually small harvest in one line may be concurrent with unprecedented abundance in another. The failure of one crop may exert a depressing influence in one part of the country, and yet be more than compensated as regards the country as a whole by expanding production and flourishing activity in another.

The three most important American crops are, respectively, corn, cotton, and wheat. Corn, although it is grown in greater or less quantities throughout the country, wherever there is tillable land, and although there are few places where it is grown exclusively, is of preponderating importance in the "corn belt." This belt includes the northern parts of Ohio, Indiana, and Illinois, the whole of Iowa, and portions of Missouri, Kansas, and Nebraska. Cotton, our next most important crop, is much more rigidly restricted. It is produced exclusively in a compact strip of country, running along the Gulf States from eastern Texas, including the Carolinas on the east and parts of Arkansas and western Tennessee on the north. Wheat, like corn, is raised to some extent in all or most of the States (twenty-five raising winter wheat, nineteen spring wheat, and some both), but in this case also there is a distinct and comparatively limited area known as "the wheat region" in the north central river basin, and more

than half of the wheat raised in the country comes from the six contiguous States, Minnesota, North and South Dakota, Kansas, Nebraska, and Missouri, the first three growing spring wheat, the latter three winter wheat.¹

Among these three crops may occur every conceivable combination of success and failure. The crops of the Southern States may be abundant when those of the Middle West are poor, which, for instance, was the case in 1894, when the cotton yield was enormous and the production of wheat and corn fell short of earlier levels. In 1895, on the other hand, the contrary situation occurred, and we had a very short cotton crop concurring with a record-breaking output of corn. Although the wheat and corn crops belong to somewhat the same regions, they may, nevertheless, vary diametrically from each other. You may find a small wheat crop, as in 1885, or in 1896, combined in each case with a record-breaking corn crop, or *vice versa* a record-breaking wheat crop, as in 1901, contemporaneous with a failure of the corn crop.

And so, while one might presume, from the wide prevalence of agriculture in America and its many interrelations with transportation interests, foreign trade, banking, and other occupations, that the general condition of business would follow rather closely the changes in the country's crops, one can see that such a generalization is only safe when rigidly qualified and carefully applied. One must bear in mind not only that the condition of the crops elsewhere will always affect the *value* of our domestic crops, whatever may have been their size, but also that other conditions, such as changes in financial legislation, passed or impending, may outweigh all of the influences of agriculture upon business; and, finally, one must remember that in a country as extensive as ours the effect of success or failure with any one kind of crop may always

¹ See the maps in the *Statistical Atlas*, 1900, plates 154, 156, 158.

be largely offset by an opposite condition with some of the other crops.

III.

Confronted with the evidence that our several crops do not always succeed or fail in the same seasons, one naturally asks which of the crops it is whose success or failure exerts the greater influence over the conditions of general business. This is a question the solution of which is so difficult and involves the disentanglement of so many interacting factors that no one is competent to offer for it anything more decisive than a personal belief, and the best we can do here is to recall some of the points of view, most of them already mentioned, which must form the bases of that belief.

At first glance one might suppose that the crop which is most extensive, or at any rate which is most valuable, would be the one which is most influential for general business. And that would be the corn crop. Of all the industries prosecuted in this country the most considerable by far, measured by the value of its output, is corn-growing. Corn is our leading product, not only when we are speaking of agriculture, but also when we include every kind of production. Our leading crops in the year 1905, according to the estimates of the Secretary of Agriculture,¹ ranked as follows:—

Corn	\$1,216 million
Milk and butter	665 "
Hay	605 "
Cotton	575 "
Wheat	525 "
Eggs	520 "
Oats	282 "
Potatoes	138 "
Barley	58 "
Tobacco	52 "
Sugar cane and sugar beets	50 "
Rice	14 "

¹ The estimates are those made at the end of the year in question. These estimates are always changed more or less before the annual volume is published, and at times even subsequent to its issue. They are at best, as are all of the figures in this paper, only estimates, derived from multifarious sources, and liable to large errors.

With these may be compared the following estimates of the value of the output in other leading industries during the same year or during the latest year for which figures are available:—

Pig iron	\$412 million
Coal	439 "
Gold	86 "
Silver	36 "
Railroad gross receipts	1,906 "
Railroad net earnings	639 "

The output of corn usually bulks three or four times that of wheat; and, although the price per bushel is considerably less, the value of the corn crop not infrequently aggregates a sum more than twice that of wheat, more, too, than the total value of the crops of wheat and cotton combined.¹ The annual output of corn is, therefore, quite naturally regarded by many as more consequential for trade than the output of our other crops. It represents an annual income in recent years of more than a billion of dollars, so that even a small percentage of change in its dimensions means a considerable fluctuation in the income of the community, and in the community's power to consume other goods. The following table shows the difference in the estimated value of the several crops from one year to another since 1890:—

¹ Estimated value of the leading American crops, from reports of the Department of Agriculture (millions of dollars):—

Years.	Corn. ¹	Wheat. ²	Cotton.	Years.	Corn.	Wheat.	Cotton.
1890 . . .	679	474	280	1893 . . .	591	213	263
1891 . . .	759	466	259	1894 . . .	554	225	263
1892 . . .	783	445	309	1895 . . .	544	237	269
1893 . . .	658	383	250	1896 . . .	491	310	237
1894 . . .	640	330	253	1897 . . .	501	428	294
1895 . . .	635	275	269	1898 . . .	552	392	260
1896 . . .	610	314	257	1899 . . .	629	319	357
1897 . . .	646	310	291	1900 . . .	751	323	469
1898 . . .	677	365	292	1901 . . .	921	467	414
1899 . . .	597	342	308	1902 . . .	1,017	422	453
1900 . . .	754	334	350	1903 . . .	952	443	587
1901 . . .	836	513	313	1904 . . .	1,067	510	586
1902 . . .	642	322	268	1905 . . .	1,116	518	

¹ Farm value December 1.

² *Ibid.*

³ As reported by Henry G. Hester, secretary New Orleans Cotton Exchange.

(Millions of Dollars.)			
	Corn.	Wheat.	Cotton.
1890	+157	—8	+42
1891	+82	+179	—37
1892	—194	—191	—45
1893	—51	—109	—5
1894	—37	+12	—1
1895	—10	+12	+7
1896	—53	+73	+18
1897	+10	+118	+7
1898	+51	—36	—34
1899	+77	—73	+97
1900	+122	+4	+112
1901	+170	+144	—55
1902	+96	—45	+39
1903	—65	+21	+134
1904	+135	+57	—1
1905	+29	+8	
Total	1,339	1,090	634
Average	83	68	42

It will be seen that the variations in the value of the corn crop during these fifteen years have reached an average of 83 millions, those of wheat an average of 68 millions, those of cotton an average of 42 millions. The variations in the value of the corn product as estimated have not, to be sure, exceeded the variations in the value of the wheat product by as large an average as might have been expected. Yet they have been, on the whole, more extensive, and, were no other conditions than variations in crop value and their effects upon consumption to be taken into account, the out-turn of the corn-fields would be rightly regarded as of greater significance for general business than that of any of our other crops, and ought naturally be looked to as the source of more considerable trade fluctuations.

From certain points of view, however, the crop which is most largely exported might be expected to affect trade conditions the most seriously in that its fluctuations may induce changes in the balance of trade, in the international movement of gold, and in the bank reserves. A falling off in such a crop might rapidly reverse our trade balance,

causing gold exports and a reduction in the cash holdings of our financial centres, and so might produce a serious stringency in the money market, while the success of such a crop, on the other hand, would not improbably result in an inflow of gold, the swelling of the bank reserves, and so might stimulate a spirit of confidence and introduce a period of buoyant expansion.

Ranked from this point of view, the cotton crop would at first glance appear the most important; for, if corn is our leading product, cotton is our leading export.

[Millions of Dollars.]

Year ending June 30.	Total exports of domestic produce.	Exports of raw cotton.	Exports of wheat and wheat flour.	Exports of corn and corn-meal.	Exports of live stock.	Exports of meat and dairy products.
1890	845	250	102	43		
1891	872	290	106	18	32	139
1892	1,015	258	236	42	36	141
1893	831	188	169	25	27	139
1894	869	210	128	30	35	146
1895	793	204	95	15	35	135
1896	863	190	91	38	41	133
1897	1,032	230	115	54	43	138
1898	1,210	230	214	75	46	167
1899	1,203	209	177	70	37	175
1900	1,370	241	140	87	43	184
1901	1,460	313	166	84	52	196
1902	1,355	290	178	17	44	199
1903	1,392	316	161	41	34	179
1904	1,435	370	104	31	47	176
1905	1,491	379	44	48	46	169

The value of our cotton exports far exceeds the value of the exports of any other article. In recent years our cotton exports have attained proportions averaging more than a million dollars per day, which is two or three times the value of the wheat exported, and all the way from three to eighteen times the value of the corn exported. In fact, they constitute on the average a fourth or a fifth of the country's total exports of domestic merchandise. The exports of raw cotton during the past decade have reached an annual average value of 260 million dollars, not to mention an export of manufactured cotton averaging

22 millions, while the wheat exports, both in the form of grain and of flour, have only reached an average of 138 millions, and the corn exports only 51 millions per year. In general, we export about two-thirds of our cotton products, between 30 and 40 per cent. of our wheat, but only 3 or 4 per cent. of our corn.¹ Of course it will be remembered that we export a large quantity of our corn product indirectly in the form of corn-fed cattle and meat products. Of this amount we have no means of estimation, not being able to separate the stock fed upon corn from that grown upon other fodder. Of live stock we have exported during the past ten years an annual average value of 43 million dollars, including cattle, hogs, horses, mules, and sheep, and of meat, including pork, beef, and mutton, and of dairy products, we have exported an annual average of 171 million dollars. Could we estimate the amount of corn which is exported in this form, we should doubtless find corn occupying a much more important position in the export trade than is indicated by the statistics just given of direct corn exports, yet obviously a change in the size of the corn crop exerts no immediate effect upon these indirect exports, and is only registered in the commerce of subsequent years.

Cotton, then, plays the predominant rôle in our export trade, and one might readily conclude that the out-turn

<i>Per cent. of product exported.</i>				<i>Per cent. of product exported.</i>			
<i>Year.</i>	<i>Cotton. Per cent.</i>	<i>Wheat and wheat flour. Per cent.</i>	<i>Corn and corn-meal. Per cent.</i>	<i>Year.</i>	<i>Cotton. Per cent.</i>	<i>Wheat and wheat flour. Per cent.</i>	<i>Corn and corn-meal. Per cent.</i>
1890	68.47	37.38	5.46	1893	71.20	41.47	4.11
1891	67.23	31.92	3.71	1894	69.83	31.46	2.36
1892	67.20	29.33	2.58	1895	65.00	27.07	4.70
1893	67.56	26.49	2.99	1896	70.59	33.93	7.83
1894	68.96	25.86	2.95	1897	67.82	40.91	11.14
1895	64.68	26.48	3.35	1898	65.12	32.97	9.21
1896	68.71	33.66	2.48	1899	65.18	34.00	10.30
1897	65.83	26.23	1.74	1900	62.87	41.36	8.63
1898	69.33	21.31	3.57	1901	64.47	31.37	1.84
1899	68.15	22.31	4.85	1902	65.01	30.28	3.04
1890	67.36	26.60	2.15	1903	60.27	18.92	2.59
1891	65.13	36.88	3.72	1904	61.55	7.99	3.66
1892	65.99	37.20	2.89				

The figures are for the years beginning July 1 in the case of wheat and corn and for the year beginning September 1 in the case of cotton.

of the cotton crop is of greater and more immediate significance for our foreign balance than the out-turn of any other crop. An examination, however, of the trade statistics for the past fifteen years, which were just cited, reveals grounds for a different conclusion. The value of our cotton exports, enormous as the aggregate has been, has not varied from year to year as widely as the value of our exports of wheat, and not in fact so very much more widely than our comparatively small exports of corn. During this decade and a half the widest fluctuations in the cotton exports occurred between the years 1892 and 1893 and again between the years 1900 and 1901, when the variations amounted to 70 and 72 million dollars respectively; yet twice during this same period the variations in the wheat exports exceeded these figures very strikingly, between 1897 and 1898, when the wheat exports increased by 99 million, and between 1891 and 1892, when our wheat exports advanced by the amazing sum of 130 million dollars. Notwithstanding, too, the minor proportions of our corn exports, their amounts have fluctuated from one year to another almost as widely as those of cotton. The failure of the crop in 1901, for instance, diminished the exports of corn and of corn-meal by no less than 67 million dollars; and, if we turn to the indirect effects visible a year or so later in the exports of meat and cattle, we find that the exports of live stock, for instance, declined by 1903 some 18 millions below the level of 1901, and the exports of meat and dairy products fell off some 17 millions during these two years. Even in the case of corn, therefore, the ultimate effects upon the export balance of a change in the size of the crop might be shown to be more severe than in the case of cotton.

The striking preponderance of cotton over all other products in our export trade, therefore, does not prove that the amount of our annual yield of cotton is the determin-

ing factor in our trade balance. Whatever the vicissitudes of the crop, the value of our cotton exports remains less liable to violent fluctuations than the value of our less extensive wheat exports. The reason is that the price of cotton adjusts itself more closely to the size of the American crop than does the price of wheat, and this gives greater constancy both to the value of the crop as a whole and to the value of the exports. American conditions do not necessarily control the price of wheat; for, although the United States produces more wheat than any other single nation in the world, it produces less than a quarter of the world's total supply. On the other hand, this country is the source of nearly three-quarters of the world's cotton, and what the world pays for that article is virtually determined by the mutations of the American crop. When the American crops are extraordinarily abundant, the world price of cotton tends to decline, and so the aggregate values of our cotton crop and of our cotton exports seldom increase proportionally to the increase in the quantity produced and exported. In fact, the greater bulk is sometimes more than offset by the lower price, and we may have such a situation as occurred in the years 1898-99, when the crop broke all known records of output, with one exception, and yet the total value of the crop was the lowest recorded during the past eighteen years. The value of the exports, too, of that superabundant year had been exceeded many times before, and have been invariably surpassed in the subsequent years, although their amount was with a single exception the greatest ever known. Conversely, a diminution in the amount exported, because of a comparative failure of the American crops, does not necessarily involve a serious reduction in the total value of the exports. The crop of the season 1903-04 was a comparative failure, being the smallest with one exception in seven years, yet its estimated

value was more than double that of the record-breaking year 1898-99, and exceeded that of any other year by more than 100 millions of dollars. The exports of cotton in this same year of so-called crop failure, though the smallest in bulk with one exception during a decade, out-distanced the best of records in value by nearly 60 millions of dollars. The vicissitudes of the cotton crop are, therefore, not so vitally significant for our foreign trade as one might suppose from a superficial consideration of the relative amounts exported of the various crops. Any increase or decrease in the bulk of the American cotton crop is more than likely to be compensated for by a converse movement in the price of cotton, and changes in the amount exported are apt to be offset by opposite changes in value. This is much less certain to occur in the case of wheat, because of the wider area in the world over which it can be produced, and the relatively smaller contribution which America makes to the total supply, which in the end determines its price. On the whole, then, we may tentatively conclude that the success or failure of the wheat harvest, more than that of any other vegetable product, is productive of sudden and important changes in the balance of trade.

But another consideration which we saw to be influential was the extent to which the crop is transported. Very little of our enormous corn supply is carried far from the locality of its production. Most of it is fed to live stock, especially hogs and cattle, which are raised in the region where it is produced, the principal meat-producing States being those of the corn belt. Of course, a failure of the corn crop will tend eventually (in the course, perhaps, of a year or so) to reduce the shipments of cattle and meat to the seaboard and to places of consumption, but fluctuations in the corn crop have but little direct and immediate effect upon the amount of freight carried. As for

cotton, domestic means of transport are only slightly affected by the size of the crop, two-thirds of which goes abroad, the greater part directly from Southern ports at Galveston, New Orleans, and Savannah, and principally in foreign vessels. The wheat crop, on the other hand, is much more closely connected with our transportation interests, for the wheat of the Middle West is carried far and wide by rail and steamship to all ends of the country. Not only the third of our total product which is destined for export, but a great part of the grain or flour destined for domestic consumption as well, has to be shipped over considerable distances. An abundance or shortage of the wheat crop, therefore, makes at once a serious difference in the amount of railway traffic, and is at once registered in the railway earnings. One can see, then, how indirectly a wide deviation in the wheat crop, by giving a new turn to railway earnings, may affect railway construction and expenditures for railway maintenance, and so in turn may even cause some reverberations in the iron industry. As the wheat crop appeared of primary significance for our foreign trade and the bank reserves of our financial centres, so it takes first rank also from the point of view of our railway and shipping interests.

Again, we observed that the success or failure of the harvests would affect those occupations in which agricultural products entered as a raw material. As for cotton, manufacturing interests will be directly touched by variations in the cotton crop, not only in the cotton mills of Massachusetts and Rhode Island, but also in the rapidly multiplying mills of Georgia and the other Southern States. Changes in the corn supply will directly affect cattle raising, and indirectly will affect the packing interests and the distillers. Changes in the wheat supply will have their direct effect in the centres of the milling industry. The output of each of the crops is thus of great consequence

to the business interests of a particular locality; but it would be extremely difficult, looking at the country as a whole, to estimate the comparative influence of the several crops in this connection. Only a third of the cotton remains for manufacture within the country, while more than two-thirds of the wheat and over nineteen-twentieths of the corn remain; but, on the other hand, cotton passes through many more processes in the course of its manufacture, and occasions employment for much more labor and capital for a given amount, than either of the other products. And, similarly, a somewhat greater proportion of the wheat than of the corn passes through a factory or mill, and gives further employment to labor. It appears fatuous, therefore, to attempt to decide which of these crops is connected the most importantly with other industries as a source of raw material.

Looking at the question broadly and from all points of view, although the matter is not one upon which a decisive judgment can be rendered, it would appear that in the past variations in the wheat crop have probably been the most significant for general business. That crop has often been worth less than half of the value of the corn crop, and changes in its amount have probably not affected the country's general income and consumption as much; but it has been much more closely connected with the transportation interests of the country, and it has exerted a more variable and more immediate influence upon the general trade balance. The cotton crop has frequently been more valuable, and has entered in far greater proportions into our foreign trade; but the cotton product does not affect American transportation interests to a similar extent, and the value of our cotton exports has remained comparatively steady, whatever has been their amount. Of the several American crops, then, we may tentatively conclude that that of wheat is most closely

related to business at large, and that the fluctuations in its output are the most widely felt. This by no means implies that the wheat crop has always been the dominant factor in determining the measure of prosperity in trade. Numerous other influences, as we have already seen, have played from time to time the leading rôle, and there have been occasional years, as in 1884-85, when a season of profound depression in business accompanied and followed a record-breaking output of wheat, or as in 1900-01, when a period of great buoyancy and commercial advance ensued upon a deficient crop of wheat. The supposition which we have made with regard to wheat is only one of general tendency, liable, as is every influence in this world, to be overbalanced by counteracting factors.

Granting that wheat has exceeded the other agricultural products in the past as a trade-influencing factor, its continued supremacy in the future is still open to question. Conditions are continually changing, and within the past two or three years there have not been lacking indications of the diminishing importance of the wheat crop as a factor in our trade balance. Our wheat exports declined so rapidly in 1904 and 1905 that for the time being we appeared no longer in the ranks of important wheat exporters. The total wheat exports during the fiscal year 1904-05 were the smallest in our history since 1872. Whether this situation marks a permanent change or only a temporary divergence due to a succession of short crops, one cannot as yet determine. Certainly, crops which would have seemed very large ten years ago would to-day be insufficient to feed our people and leave a surplus. Many have, therefore, jumped to the conclusion that we shall never regain our place as a wheat-exporting nation, and that with the rapid increase of our population we shall produce little more grain than is necessary for home consumption. If this should prove to be the case, the influ-

ence of the wheat crop upon our foreign balance, upon gold exports, and upon bank reserves, would evidently cease to play in the future the part it has played in the past.

IV.

The appended chart presents graphically the story of the crops during the past thirty-five years. During that period there have occurred, along with many minor fluctuations, two great movements of industrial and commercial advance, each of amazing proportions, and each initiated by a series of extraordinarily successful harvests in America which were coincident with extraordinarily poor harvests abroad. The first was the movement from 1879 to 1882, when the country was rapidly lifted from a six-year slough of business depression to one of the most prosperous periods in its entire history. Of this movement and its causes, which are familiar facts of history, some mention has already been made. Its propelling force arose unquestionably from the coincidence of a series of crop failures abroad in 1879, 1880, and 1881,—failures for which in duration and extent, it is said, “there had been no parallel in four centuries,”¹—with two successive American harvests, in 1879 and 1880, whose dimensions exceeded all precedents in all of the leading products. These conditions not only resulted in huge profits for American farmers and dealers in produce; they stimulated the earnings of the railways; they induced a favorable balance of trade and the influx of more than 200 millions of gold during the three years from 1879 to 1881; and they instigated a spirit of confidence, an expansion of demand, and an activity of exchange which carried the records of American business of every sort far beyond the highest levels known before.

The second great movement of advance is that which

¹D. A. Wells, *Recent Economic Changes*, p. 6.

began in 1897, and still continues to day (1906) after nine fabulous years of prosperity and almost uninterrupted increase. This movement also originated in an extraordinarily remunerative harvest, and its unprecedented duration is doubtless in large measure due to the prolonged continuance of agricultural success. After four years of prolonged depression, during which any revival of business had been prevented by the threat of a revolutionary change in our standard currency, the way was cleared of this hindrance at last in the autumn of 1896 by the overwhelming defeat of the extremist program in the Presidential election. To this defeat the agricultural situation of that autumn contributed, as every one remembers, a decisive influence. The conjunction of a failure of the wheat crop in India with a shortage in Australia served to raise the price of American wheat from 53 cents per bushel in August to 94½ cents at the time of the election in November, upsetting the arguments of those who had advocated the unlimited coinage of silver as the only means of raising prices, and turning the electoral tide against them in several of the doubtful Middle Western States. The principle obstacle to recovery being thus removed, in the following year a strikingly favorable turn in agriculture gave the necessary fillip to trade and set the country once more on the highway of prosperity.

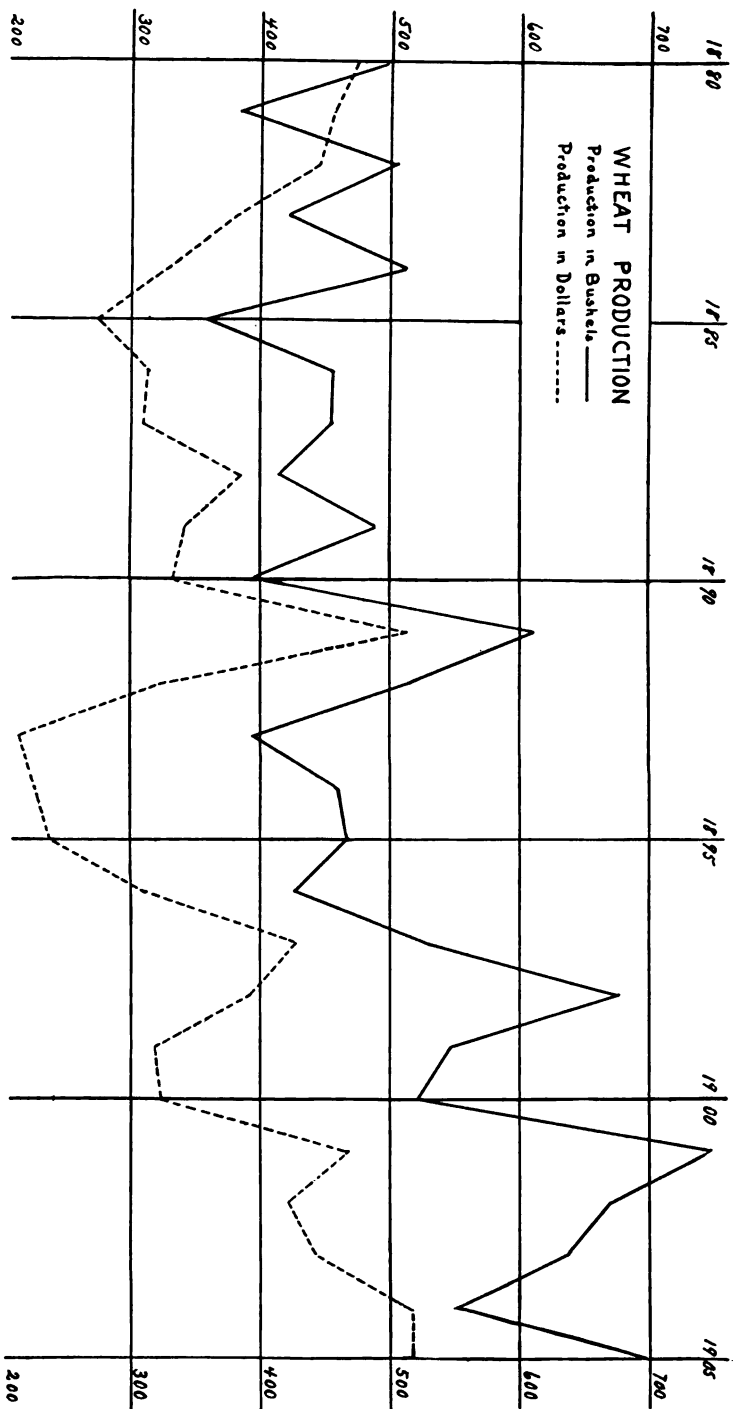
Early in the summer of 1897 it became known that the crops were again a failure in India, Australia, and in the Argentine Republic. Russia had had a poor wheat crop in 1896, and seemed likely to have another in 1897. In France on account of a scorching drought the harvest was very deficient. In Austria storms and floods had done great damage. In a word, for one reason or another, the season proved disastrous all over Europe, and the European wheat crop fell short of that of the previous year by some 350 million bushels,—a loss of about one-third.

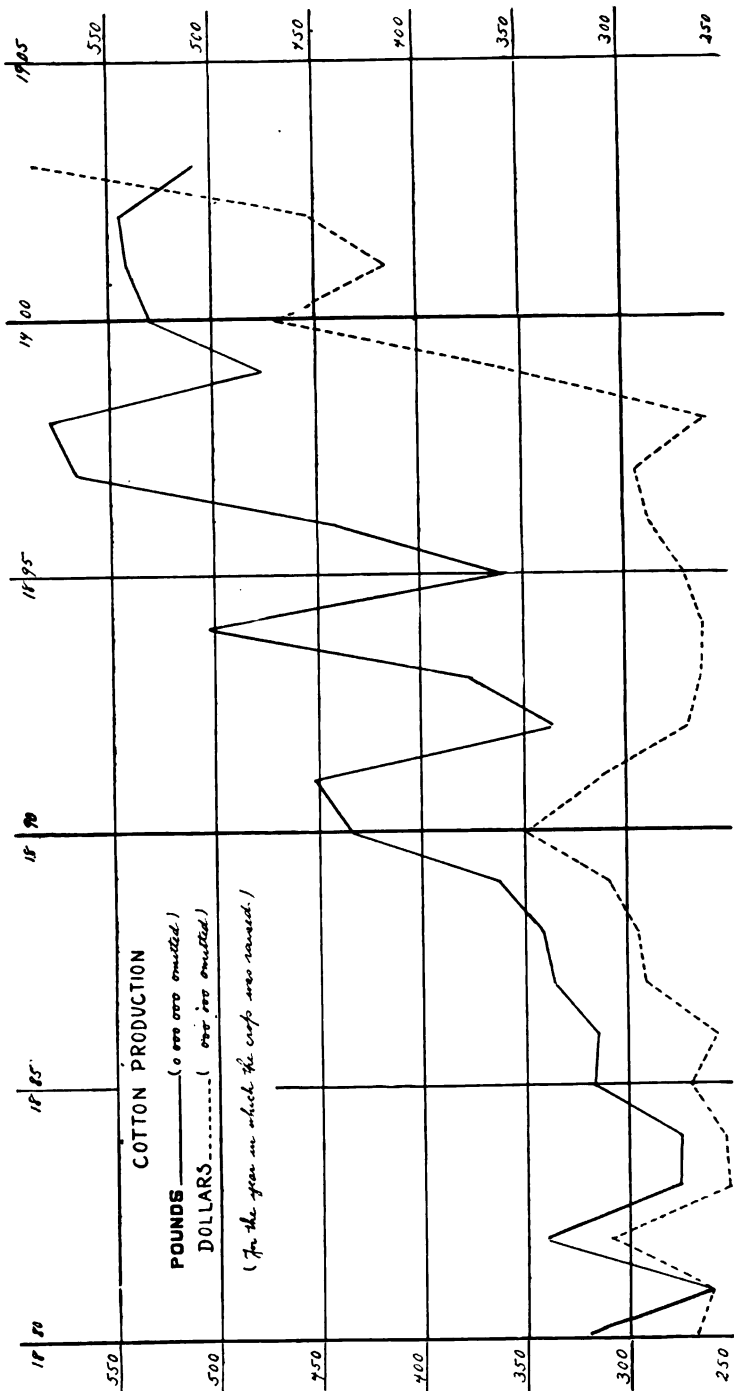
The demand for American wheat in consequence assumed new dimensions, and the price in August ran considerably above a dollar per bushel, or more than twice the price prevailing at that season a year before. The American crop, meanwhile, ran ahead of that of the previous year by 145 million bushels, and proved with one exception the largest in our history. The farmers of the Middle West got two or three times as much per bushel as they had been receiving for several years; and, as they disposed of their increased output at these much advanced prices, they were rapidly lifted from a condition of extreme depression to one of prosperous activity. They began to pay off their farm mortgages, and so set locked up capital free; and at the same time they greatly enlarged their purchases of goods. This in turn gave a stimulus to trade in the factory centres of the East, which were called upon to meet the new demand for manufactured goods. The same conditions added enormously to the tonnage and earnings of the Western railroads, opening up a new era of prosperity for them; and, as the trade of transportation is one of great importance and of wide-spread ownership, the whole country reaped an advantage.

The bearing of the crop situation of 1897 upon our foreign trade was no less important. Our exports of wheat and corn increased in the course of the year that followed by a valuation of over 120 millions of dollars, and our relations with the international market were reversed. Instead of exporting gold, we imported 142 millions. Through this movement not only was credit stimulated by the enlargement of the cash resources of the banks, but also by the new accessions to the government's gold reserve, which had been passing through the direst of vicissitudes during the years just preceding, and which now rose to the highest figure ever reached in the country's history. Great agricultural windfalls had once more set

the wheels of trade in motion and initiated a new period of prosperity.

The prolonged continuance of this upward tide beyond the term of any previous period of prosperity in the past half-century has amazed the world and aroused much speculation as to its cause. Some have attributed it to the wane of radicalism in politics and the growing conservatism of our legislatures in matters of currency and finance. Some have connected it with the increasing concentration of control in industry and transportation which has obliterated the wars between rival interests and the protracted discrepancies between supply and demand that formerly afflicted the country's business. Many have credited it to the increasing output of gold, which has almost doubled in the past ten years and more than trebled in the past twenty, and which has tended steadily to inflate bank reserves, prices, and profits. Others have attached great importance to the growing centralization of power among the New York banking interests, and the extension of their international affiliations, with the consequent increase in their ability to secure foreign assistance in times of impending trouble. Unquestionably, however, another factor not to be overlooked in explaining the longevity of the period is the persistent success of American agriculture during these recent years,—a success which, unlike that of previous periods, has for the time being depended neither upon the abundance of the American crops nor upon the failure of the crops abroad. There have been no serious crop failures in Europe since 1897, and upon several occasions since then one or another of the American crops has fallen short; yet the prosperity of American agriculture not only has remained unimpaired, but has actually advanced to ever higher and





higher levels. With regard to two of the agricultural staples of the country, cotton and wheat, the demand throughout the world has from all appearances increased more rapidly during the past half-dozen years than the output, so that in several cases, even when the harvests have shown a decline in bulk, their aggregate value has expanded.¹ Whether the increasing demand is the consequence of general prosperity or not is a matter of question, but certain it is that the world's consumption of these staples for some reason or other has taken on new dimensions, and, notwithstanding an increasing output, less has been produced than could have been sold with a profit. The prices of cotton and wheat during recent years have risen in consequence to levels not witnessed before for a generation, and one has to turn back to the year 1883 to find their prices averaging as high as during the past two years, 1904 and 1905. In fact, both the cotton and the wheat crops of the last three or four years have aggregated a value not far from double those of similar years a decade ago.

The agricultural situation of to-day is novel in many respects. In previous trade cycles of the past forty years, agricultural conditions in the West and the South have often tended to act as drags upon the resources of the industrial and commercial centres of the East. The farming population was poor and heavily mortgaged. They had to work very largely on credit, and to wait until the harvest before making the current year's expenditures. They had not means sufficient to harvest their own crops, much less to carry over stocks from the superabundant years to meet an anticipated shortage. Under such circumstance any considerable diminution in the crops was very apt to cause serious reaction or to prolong an existing depression. But during these late years the great farming areas, whether

¹See appended charts, No. 1 and No. 2.

of the West or South, have become financially independent and prosperous as never before. Their people have lifted many of their mortgages, and now are lenders where before they were borrowers. They are much better able to cope with any temporary shrinkage in their harvests or to take care of any temporary surplus. As a matter of fact, the agricultural situation to-day, instead of being an aggravating influence in a general decline, as was the case ten or twelve years ago, has become the bulwark upon which the mercantile and financial interests of the country rely to break the force of every threatened reaction.

We have seen how all the great movements of business expansion in America during recent times have been initiated by conditions of agricultural success. It has also been true that most of the turning-points in the other direction have been preceded by agricultural failure. The year 1872, which marked the beginning of the first long period of retrenchment during the years under consideration, was preceded in the autumn of 1871 by a serious shrinkage in the cotton crop and by an appreciable decline in the crops of corn and wheat. The year 1882, which marks the beginning of the next commercial decline, ensued upon a destructive drought that extended over most of the United States, and caused a shrinkage in all of the staple crops. The crop failures of the autumn of 1881 cut down freight earnings the following year by some 45 million dollars, reduced our export trade by 150 millions, converted a favorable into an unfavorable trade balance, and resulted in the export of 32 millions of gold before the following June. They thus furnished the initiatory impulse for the long decline of the middle eighties. Turning to the early nineties, we have seen how in this complicated period the marvellously favorable crop conditions in 1891

had failed, because of political uncertainties, to stimulate a repetition of the prosperity of the resumption period. In the first months of 1892 they succeeded in swelling the tonnage of the railroads and the exports of domestic produce to tremendous volume, and so reanimated general business temporarily; but in the following autumn (1892) the crops shrank back to their former proportions. The harvests of wheat and corn and cotton all registered a decline; and, with the impetus of agricultural success removed, the country's business entered rapidly upon the downward course which culminated in the memorable crisis of 1893. All three of these periods of revulsion were preceded by, if not altogether caused by, crop shortage.

Looking back over the sweep of economic events in the United States during the past four decades, while one must admit that the influence of the crops has not always been the predominant factor in business, one can readily perceive their usual and very extended significance. The relation between agricultural success or failure and the prosperity or decline of general business has not, to be sure, proved as close and inevitable as Jevons and certain other students of crises have been inclined to believe. Crises have not ensued invariably and immediately upon every crop failure, nor have eras of upbuilding followed with clock-like regularity after every bountiful harvest. Yet one cannot review the past forty years without observing that the beginnings of every movement toward business prosperity and the turning-points toward every business decline (movements which frequently, it will be remarked, have antedated the actual outbreak of crises by several years) were closely connected with the out-turn of the crops. In other words, the presumptive relationship, for the existence of which we found abundant reason earlier in the paper, we find to be a matter of experience and historical fact.

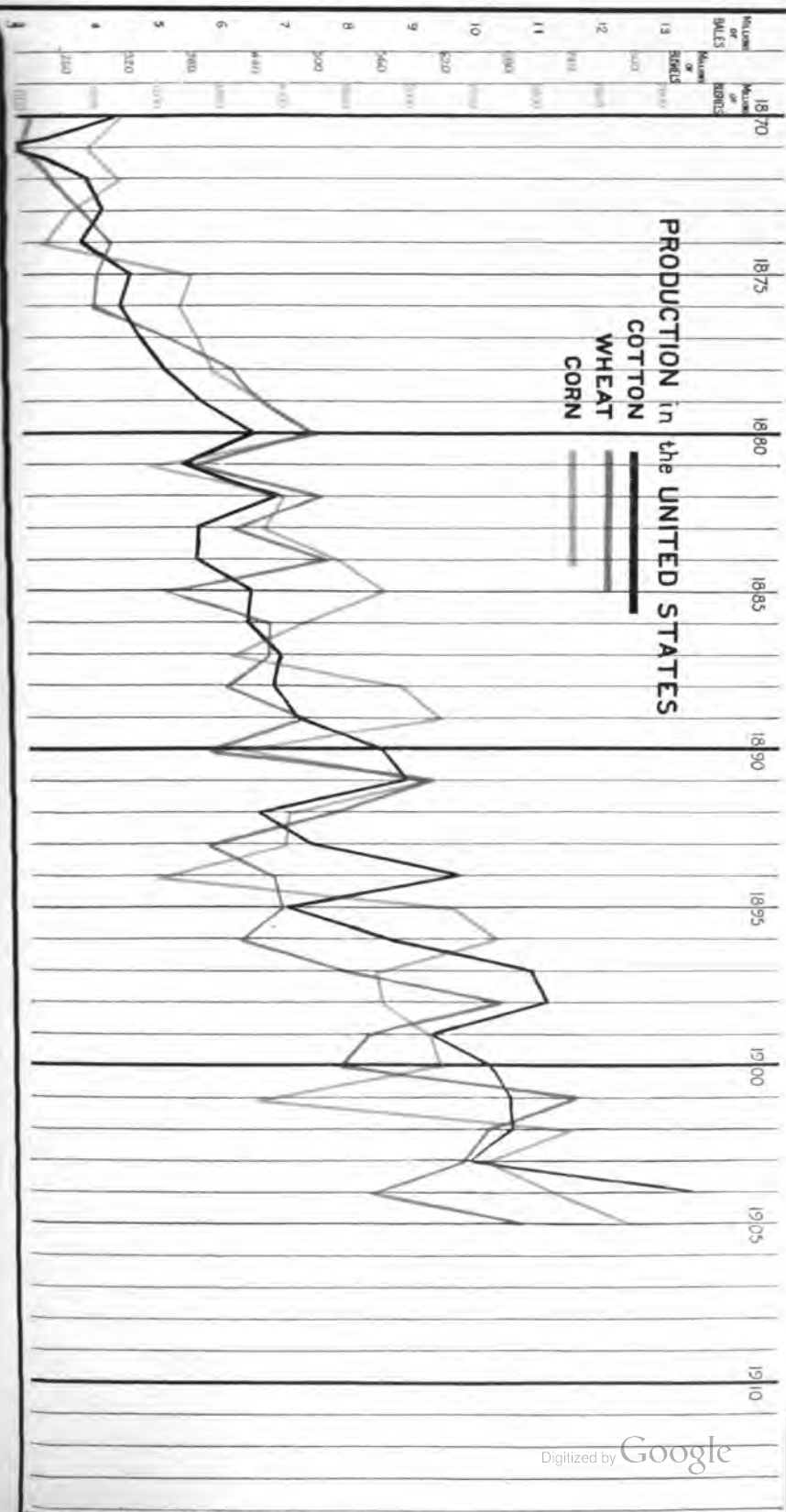
A. PIATT ANDREW.

THE AMERICAN CROP FOR 35 YEARS.

Year. ¹	Cotton, millions of bales. ²	Wheat, millions of bushels.	Corn, millions of bushels.
1870	4.35	235	1,094
1	2.97	230	991
2	2.93	249	1,092
3	4.17	286	932
4	3.83	308	850
5	4.63	292	1,321
6	4.47	289	1,283
7	4.77	364	1,342
8	5.07	420	1,388
9	5.76	448	1,547
1880	6.60	498	1,717
1	5.45	383	1,194
2	6.94	504	1,617
3	5.71	421	1,551
4	5.70	512	1,795
5	6.57	357	1,936
6	6.50	457	1,665
7	7.04	456	1,456
8	6.93	415	1,987
9	7.31	490	2,112
1890	8.65	399	1,489
1	9.03	611	2,060
2	6.70	515	1,628
3	7.54	396	1,619
4	9.90	460	1,212
5	7.15	467	2,151
6	8.75	427	2,283
7	11.1	530	1,902
8	11.27	675	1,924
9	9.43	547	2,078
1900	10.38	522	2,105
1	10.68	748	1,522
2	10.72	670	2,523
3	10.01	637	2,244
4	13.55	552	2,467
5	—	693	2,707

¹ The year quoted is the year in which the crop was raised; e.g., in the case of cotton, the year beginning September 1.

² The bales have tended to grow heavier, and have varied from 440 to 490 lbs.



THE GERMAN STEEL SYNDICATE.

COAL and iron are the foundations upon which national industrial greatness is based. Germany is pre-eminent in both, and in both of them there are powerful combinations. In the coal industry Germany takes the third rank among the nations of the world, but in iron and steel she is second only to the United States. In 1904 the pig iron production of the four leading countries of the world was approximately as follows: the United States 16,781,000, Germany (including Luxemburg) 10,119,000, Great Britain 8,500,000, and France 3,000,000 tons.¹ In steel production Germany has an even greater lead over Great Britain. The present position of Germany is the result of recent developments, which, though rapid, have been very steady.

The two primary natural conditions for the iron industry are ore supply and fuel. In both of these respects Germany is richly endowed. In regard to iron ore production Germany is only surpassed by the United States: in 1904 the total output of iron ore was 22,047,393 tons.² The coal output in 1905 (excluding lignite) was 121,190,249 tons. For iron ore production by far the most important district is the "Minette," which lies in Lorraine and Luxemburg, and extends over their borders into France and Belgium. The next most important region is on the right bank of the Rhine in the valleys of the Sieg, the Lahn, and the Dill. The production of ore in the other regions is comparatively small, the two most noteworthy regions being one in the

¹ *Jahrbuch f. d. Oberbergamtsbezirk Dortmund*, 1901-04, p. 747.

² *Vierteljahrshefte zur Statistik des Deutschen Reichs*, 1905, Heft IV.: of which Prussia 3,757,651 tons, Alsace-Lorraine 11,135,042 tons, and Luxemburg 6,347,771 tons.

province of Hannover and the Duchy of Brunswick and another in Upper Silesia. There are three great coal regions in Germany. The greatest is that of the Dortmund or Ruhr district, which produces more than half of the total. The next in importance is Upper Silesia, while the Saar is third. The coal deposits of Lorraine, which are nearest to the great ore deposits of the Minette, are not yet developed. The nearest district of fuel supply is the Saar, but the coal of that region is not well adapted to the reduction of ores. The Minette, therefore, must be reduced by the Ruhr coal, and an exchange is made between the two regions, the pig iron industry being about equally divided between them. The Ruhr also uses a good deal of ore from the Sieg, Lahn, and Dill districts, as well as a large amount of foreign ore. In Upper Silesia the iron ore and coal are found in close proximity, but the supplies of the former are too scanty for the industry of that region, and a large proportion has to be imported, especially from Austria and Hungary. The Ruhr coal district is not only first in the magnitude of its coal output, but also in the quality of the coal, which is especially adapted to the production of coke. In this respect neither Silesia nor the Saar can compare with it. Although the enormous iron ore production of the Minette is of a low grade, its cheapness makes up for the deficiency in iron. The Minette ore is a brown hematite with from 35 to 40 per cent. of iron¹ and from 0.04 to 1.96 per cent. of phosphorus.² The ore deposits are of great depth, and sometimes as much as fifty metres thick.³ On account of its high percentage of phosphorus this ore was not much valued

¹ Gouvy, *État actuel des industries du fer et de l'acier dans les provinces du Rhin et de la Westphalie*, Paris, 1903, p. 32.

² Tübben, *Die Eisenhüttenindustrie im Oberbergamtsbezirk Dortmund und ihre Versorgung mit Eisenerz. Mittheilungen ueber den rheinisch-westfälischen Steinkohlen-Bergbau. VIII Allgemeinen deutschen Bergmannstag zu Dortmund*, 1901, p. 323.

³ Krauss, *Eisen-Hütten-Kunde*, I. Th. p. 21.

until the discovery of the Thomas process (basic converter). The ore of Siegerland, red hematite, contains considerable manganese, and is of a high quality.

Although Germany is a large producer of iron ore, she is also a large importer and exporter. In 1904 Germany imported 6,061,127 tons of iron ore and exported 3,440,846 tons. Large quantities are imported for mixing with domestic ores. In the Rhenish-Westphalian district iron ore is used from over one hundred different places, including almost all known sorts,¹ and coming from almost all parts of the world. The usual mixture in this region is Minette, 35-40 per cent.; Swedish, 35-40 per cent.; red hematite, 10 per cent.; and other, 10 per cent.² In Silesia a typical mixture is said to be 27 per cent. of the local ore with 21 per cent. of cinder, 23 per cent. of Swedish, and 25 per cent. of Hungarian ore.³ Another reason for the large iron ore imports is that there are many iron furnaces far from the domestic regions of supply, so that the foreign ore can often be delivered more cheaply.

The distribution of the pig iron production of Germany and Luxemburg is shown in the following table:⁴—

¹Tübben, p. 316.

²Gouvy, pp. 32-33.

³Symphor, *Die wirtschaftliche Bedeutung des Rhein-Elbe-Kanals*, Berlin, 1899, p. 144.

⁴*Stahl u. Eisen*, February 1, 1906, p. 171.

PRODUCTION OF PIG IRON IN GERMANY (INCLUDING LUXEMBURG) IN 1906.

(IN THOUSANDS OF TONS: THUS 891 = 891,000 TONS.)

Kind.	Rhineland-West- phalia, except the Saar and Siegeland.	Siegeland, Lahn district, and Hessen Nassau.	Silesia	Pome- rania.	Hanover and Bruns- wick.	Bavaria, Württem- berg, and Thuringia.	Saar.	Lorraine and Lux- emburg.	Total.
Foundry	891	177	94	155	54	28	83	423	1,906
Acid Bessemer	283	38	45	—	77	—	—	—	423
Steel Iron and other Spiegeleisen	230	283	98	1	—	2	—	—	714
Thomas or basic Bessemer	2,868	213	259	—	240	133	731	2,884	7,115
Forge or Mill Iron	28	—	362	—	—	14	—	213	837
Total	4,377	711	861	156	371	177	814	3,521	10,988

13 tons only.

Looking first at the production of the different districts, it will be observed that Rhineland-Westphalia (or the Ruhr) has the largest production in 1905, and that Lorraine-Luxemburg (which includes a large part of the Minette district) is second. Together they produce over 70 per cent. of the total. Silesia and the Saar produce only about 8 per cent. and 7 per cent. respectively. If the table be examined with regard to the kind of iron produced, it will be observed that most of the iron is of Thomas or basic Bessemer steel,—in 1905 over 60 per cent., while foundry iron came second with about 17 per cent., and mill iron or puddled iron third with about 8 per cent. Acid Bessemer steel is almost negligible to-day in Germany. The bulk of the Thomas steel is produced in the German Minette or in the Ruhr, but a not inconsiderable amount is also produced in the Saar. Most of the foundry iron is produced in the Ruhr and the Minette, particularly in the former. Silesia, which occupies a very subordinate position in other respects, is the chief producer of mill iron. The two leading facts are, however, the great preponderance of the Minette and the Ruhr in the German iron industry and the predominance of Thomas or basic Bessemer steel.

The German steel industry is quite as important in the production of finished products as in the raw material. The distribution of the manufacturing industry does not correspond very closely with the distribution of the blast furnaces. Bavaria, for example, has a large machine industry, but only a trifling output of pig iron. The Minette, though it rivals the Ruhr in the output of pig iron, cannot compare with it in the output of finished products. It is only recently that the Minette has begun to develop the manufacture of rolled products on a large scale.¹ Only about one-third of the pig iron produced in the

¹ Bosselmann, "*Eisenbergbau u. Eisenindustrie in Lothringen-Luxemburg*," *Schriften d. Vereins f. Social-Politik*, Bd. 106, p. 4.

Lahn and Dill valleys is worked up there.¹ In Silesia, however, there is an extensive output of rolled products.

Between the various producing regions there is naturally a lively competition for the German market. Especially for pig iron there tend to be developed certain natural regions of supply determined, in part, by the costs of transportation. This is distinctly the case as between Silesia and the western industrial regions. Silesia controls the supply in the far eastern provinces, where it meets western competition only in finished products.² Customs duties prevent it from developing its sales to any great extent into Austria and Russia.³ For the two great western producing regions, the Ruhr and the Minette, there does not appear to be any distinct recognized division of markets, although the latter region is naturally more directed to the export trade.

Germany is a great consumer as well as a great producer of iron products, and the consumption has increased rapidly with the great development in production, population, and wealth. In 1903 the total consumption was greater than in England, although it was much below that of the United States. Reckoned, however, according to population, the consumption of England was greater than that of Germany.⁴ The total consumption depends not only on

¹ Heymann, *Die gemischten Werke im deutschen Grossisenbergwerke*, 1904, p. 129.

² Kuh, "Die Hüttenindustrie Oberschlesiens," *Schrift. d. Ver. f. Soc.-Pol.*, Bd. 106, pp. 177, 191.

³ *Verhandlungen ueber die Stahlwerksverbände*, Anlage 2, p. 34. As frequent reference is made to the Imperial Cartell Inquiry, the full titles of the various cartell investigations cited are here given, with short titles for reference. The Siemenroth edition is used except for the Stahlwerksverband. The general title is *Kontrollirische Verhandlungen ueber deutsche Kartelle*. The particular investigations referred to are: *Verhandlungen ueber die rheinisch-westfälischen Roheisensyndikats* [*"Enquete, V."*]; *Verhandlungen ueber den Halbesung-Verband* [*"Enquete, VI."*]; *Verhandlungen ueber den Verband deutscher Drahtwalzwerke* [*"Enquete, VIII."*]; *Verhandlungen ueber den Weisblechverband* [*"Enquete, IX."*]; *Verhandlungen ueber die Stahlwerksverband, Beilage z. deutschen Reichsanzeiger*, August 18, 1905 [*"Enquete, S.V."*].

⁴ Martin, *Die Eisenindustrie in ihren Kampf um den Absatzmarkt*, Leipzig, 1904, p. 52.

the production, but also on the movement of imports and exports. Germany is both an importer and exporter of iron products. The movement for 1904 is shown in the following table:¹—

	<i>Imports.</i>	<i>Exports.</i>
Pig iron and half-products	240,233 tons	701,985 tons
Iron manufactures	101,492 "	2,022,01 "

The chief imports were pig iron, scrap iron, steel bars, iron for ploughshares, and tin plate. The chief exports were pig iron, half-products, beams and girders, rails, steel bars, sheet bars and sheets, rods, coarse iron wares, etc. The principal foreign markets for German half products in 1904 were England and Belgium. More than half of the total was destined to England.² The exports of rails from Germany, on the other hand, were widely distributed, though England again was the chief market. England was also the chief purchaser for beams and girders. In regard to the official export statistics a great difficulty always exists on account of the fact that the given country of destination is not the country of final destination or consumption. The exports to Holland and Belgium are, in large part, really destined for England.

Although the German iron industry is extremely formidable in international competition, it undoubtedly finds a good deal of its strength in the existence of an effective protective tariff, which secures the home market and enables it to dump its surplus products in the world markets. The protection established for the iron trade has a vital relation to the existence of the various iron and steel combinations. Before the present protective policy for the iron trade was inaugurated, the production lagged far behind the consumption.³ In 1878 a special committee of inquiry was appointed to investigate the subject, which

¹ *Jahrb. f. d. O. Dortmund*, 1901-04, p. 734.

² *Enquete, S.V.*, Anlage 7.

³ *Heymann*, p. 137.

almost unanimously agreed that protection for the iron industry was necessary, and this conclusion was followed by a law 1879 which imposed duties higher than those recommended, which remained in effect without substantial change down to the recent recasting of the tariff (to go into effect March 1, 1906). The duties on an ad valorem basis, both in the old and in the new schedules, amount to about 15 per cent. on pig iron, 20 per cent. on rails, 16 per cent. on sheets, and 9 per cent. on rods.¹

There are a number of large iron and steel concerns in Germany which combine with the manufacture of steel the production of the raw materials, iron, ore, coal, coke. But the individual concern has ceased to be the unit in German industry to a large extent. The modern unit is the cartell. The most important matters of commercial and economic policy are determined to-day by these combinations.

Combinations in the German iron industry are of ancient date, and have assumed forms adapted to the contemporary economic organization.² The distinction between the early methods of combination and the modern system lies not only in the more comprehensive character of the latter, but also in the fact that the modern iron industry is established on a stupendous scale, and operates for the world market. It is often stated that the first German cartell was the tin plate combination, which was formed in 1862;³ but this was not the first cartell even in the iron trade. Rail pools existed over fifty years ago.⁴ It was not until the seventies, however, that they acquired much importance.

¹ Voelcker, "L'État actuel de l'industrie sidérurgique allemande et sa organisation," *Revue économique internationale*, Décembre, 1904, p. 734. Cf. *Der deutsche Zolltarif vom 25 Desember 1902 mit dem auf den Handelsverträgen des Deutschen Reichs . . . beruhenden Bestimmungen*, Berlin, 1905.

² Cf. Heymann, pp. 56, 59, 60, 96, 135, 136, etc.

³ Grossmann, "Ueber industrielle Kartelle," *Jahrb. f. Gesetzg.*, Jahrg. 1891, p. 243.

⁴ Kollmann, *Der deutsche Stahlwerksverband*, Berlin, 1905, p. 6.

There was an over-development of the iron industry at the beginning of that decade, and during the following depression the producers resorted to combinations to restrict their output and to maintain prices. The early cartells were generally quite limited as respects the commodities and the region included in the agreement. The first important exception to this (apart from rail pools) was the combination of German Rolling Mills, which originated in 1886 in Silesia and expanded to include the whole country. It exercised a very marked influence over the German iron trade down to its dissolution in 1893, in the face of new competition.¹ The head of this combination, Caro, declared at the time that it failed because a cartell of rolled products could not stand alone: it was necessary to cartell the raw materials and the finished products also. At that time, however, the producers of raw materials—coal and pig iron—had not been able to extricate themselves from the position into which their previous over-development had brought them. They were also facing a constant decline in prices, owing to rapid reductions in the cost of production due to technical improvements.² The rolling mills and the manufacturers of finer wares were in a relatively favorable situation. They often got their raw material under cost.³ The large mixed works, or those which combined the production of raw materials with the manufacture of commercial products, complained of the disadvantage at which they were placed as compared with the straight rolling mills (*reine Walzwerke*).⁴ There was no advantage at that time for a rolling mill to acquire coal mines or to establish blast furnaces, and hence the

¹ Cf. Caro, "*Der deutsche Walzwerkverband*," *Schriften d. Vereins f. Soc.-Pol.*, Bd. 60, pp. 43 et seq.

² Cf. Kostner, *Die deutschen Eisensäge*, 1902, p. 13.

³ Vogelstein, "*Die rheinisch-westfälische Montan- u. Eisenindustrie*," *Schriften d. Vereins f. Soc.-Pol.*, Bd. 106, pp. 81-83.

⁴ Heymann, p. 149.

policy of combining the various stages of production, which had been quite conspicuous at an earlier period in the Ruhr district, did not find frequent illustration at this time.

Fundamental changes appear in the general conditions of the industry at the beginning of the nineties. A tolerably successful pig iron cartel had been established in the Ruhr in 1884,¹ but it was not until the Coke Syndicate was accomplished in 1890 that a secure basis was formed. The iron industry was still in a weak position. In 1892 the pig iron producers of the Ruhr and the Minette got together, while a pig iron cartel was formed in Siegerland two years later.² The ore production in Siegerland was combined in the same year.³ In the Minette the ore was almost entirely controlled by the blast furnaces.⁴ More important than all of these was the formation of the Coal Syndicate in 1893.⁵ This powerful combination dominated the whole industry during the ensuing decade. Thus the foundations were laid for a new régime in the iron trade, in which those who controlled the raw materials were to have a great advantage. The days of cut-throat competition between mining companies, in which the iron manufacturer could speculate on the demand for finished products with the assurance that the raw material would be abundant and cheap, were over. The new fuel cartells were founded on the principle of monopoly control, and the pig iron cartells partook, to some extent, of that character also. The combinations among the manufacturers of iron products did not keep pace with these developments among the producers of raw materials. The cartel of German Rolling Mills was dissolved in 1893, and no general combination appeared to take its place. The rail pool seems to have maintained a continuous existence, but the

¹ Grossmann, pp. 240-241.

² Heymann, pp. 72, 152.

³ Sayons, *La crise allemande*, p. 116.

⁴ Boeselmann, p. 15.

⁵ Cf. Walker, *Monopolistic Combinations in the German Coal Industry*, New York, 1904.

beam pool was dissolved about 1892, though reorganized shortly after.¹

In 1894-95 a marked improvement appeared in the commercial situation in general, and in the iron trade in particular, which lasted until 1900. Although some of the earlier cartells may have been "*Kinder der Noth*," the period of prosperity furnished apparently a healthful environment for growth.

The most important event of this period was the establishment of a half-products cartell. This innovation was a consequence of new technical conditions, and particularly the development of great steel mills for the production of Thomas or basic steel. The characteristic products of these steel mills are rails, beams, and half-products (ingots, billets, sheet bars, etc.). The half-products are the raw material of the rolling mills. The large steel works found that the straight rolling mills were not keeping pace with their development, and that it was safer, as well as more profitable, to work up their own crude steel to a large extent. They were generally mixed works, controlling their own supplies of fuel, ore, and pig iron. These works formed the Half-products Syndicate (*Halbzeugverband*), and this cartell, combined with the rail and beam pools, was the immediate forerunner of the present Steel Syndicate. At first, however, they had a price agreement simply, and it was somewhat later (1899) that the sale of half-products was syndicated.² This cartell soon included all the great steel works of western Germany. The works supplied the straight rolling mills with their raw material, and at the same time competed with them in the manufacture and sale of rolled products. This put the rolling mills in a dangerous position, because, techni-

¹ Heymann, p. 153; Kollmann, pp. 7, 8.

² Cf. Voelcker, *Bericht ueber das Kartellwesen in der inländischen Eisenindustrie*, Berlin, 1903, p. 52. Cf. A. Kirdorf, *Enquete*, VI., p. 410; Kollmann, p. 7.

cally, they were no match for the great steel works. In 1897 a comprehensive but complicated cartell was established between the pig iron producers of the Ruhr, the Minette, and Siegerland.¹ In the period between 1895 and 1904 the principal cartells established for rolled products were as follows: heavy sheets² and rods³ in 1897, wire nails in 1898,⁴ and light sheets in 1902.⁵ The rolling mills failed, however, to cartell steel bars. In Silesia rolled products were effectively cartelled ever since 1887, in one form or another.⁶ These cartells do not comprise, by any means, all of those found in the steel industry during this period, but were the most important connected with the development of organization in the steel trade.⁷

The development of cartells in various steel products called forth protective organizations among the consumers. An important organization of this sort was the Rhenish-Westphalian Purchase Association for pig iron, which was established in 1901.⁸ More important than this was the Association for the Protection of the Interests of the Consumers of Half-products which was formed in 1902. This included forty-two concerns, mostly straight rolling mills, with a demand (in 1903) for 560,000 tons.⁹ There were numerous other purchasing combinations, especially during the recent crisis.

The reasons for the formation of the Steel Syndicate, according to an official statement made to the government, were substantially as follows: The discovery of the Thomas or basic process had made practicable the utilization of the immense deposits of phosphoric ore in the

¹ Heymann, p. 153; Voelker, *Bericht*, pp. 30-37.

² Kestner, pp. 55, 56.

³ *Enquete*, VIII., pp. 696, 697.

⁴ *Ibid.*, p. 711.

⁵ *Statistik d. Oberschles. Berg- u. Hüttenwerke*, 1902, p. 80.

⁶ *Enquete*, S.V., Anlage 2.

⁷ Cf. Voelker, *Bericht*, p. 73 et seq.; *Enquete*, VI., pp. 375, 376; *Deutsche Industrie-Zeitung*, 1903, p. 141.

⁸ *Enquete*, V., pp. 353, 354.

⁹ *Ibid.*, VI., p. 401.

Minette district, and had given rise to a number of large steel works adapted to that purpose. This, in turn, had induced the existing steel works to modernize and enlarge their plants, which caused an overproduction of steel, and imposed upon the steel works the necessity of combining to restrict their output. The earlier efforts in the way of price agreements proved ineffectual, and made necessary the establishment of stronger combinations. Strong cartels thus established in various steel products proved defective also, because they lacked control over the export trade, as well as a comprehensive oversight of the market. The Steel Syndicate was formed, therefore, with the intention of bringing about a harmonious action in all lines of steel production. The first step was to secure an effective combination of the heavy rolled products (half-products, rails, and structural steel), and these products could be more easily brought into a combination because they were made to a great extent by a limited number of large mixed works, which had a certain economic likeness. The next step was to bring about a cartel for the light rolled products. This, however, had not gone beyond a determination of quotas, and awaited an agreement with the outside straight rolling mills and the Siemens-Martin (open hearth) steel mills before it could be firmly established.¹

The project for the Steel Syndicate was first broached in a practical sense in the autumn of 1902. The chief spirit in the movement was Adolf Kirdorf, the head of the Half-products Syndicate. After preliminary preparations a meeting was held in February, 1903, which chose a commission to work up a plan. This plan came up for acceptance in the autumn of the same year. There were the usual protracted negotiations, but finally all of those works whose adhesion was regarded as vital were secured

¹ *Enquete, S.V., Anlage 5.*

by various compromises and concessions, except Krupp, Phoenix, and Westfaelische Stahlwerke. The agreement was ratified nevertheless on March 1, 1904, and almost immediately after Krupp joined in consideration of an enlarged quota. It was deemed essential, however, that Phoenix should enter the combination, and the newly formed Syndicate applied all its commercial and financial influence, especially with the Coal Syndicate and the banks, to achieve its purpose, treating it as a "scab" concern. The management of Phoenix refused to join because they regarded the quota allotted to them as insufficient. The Syndicate soon succeeded, chiefly through the influence of the great banks, in getting the shareholders of Phoenix to reverse the policy of the management. The vigorous and drastic measures which the Syndicate took to accomplish its purpose excited a good deal of unfavorable criticism, but Phoenix has accepted the situation with a tolerably good grace.¹ As a matter of fact, its profits have shown a large increase.²

The Stahlwerksverband went into effect on March 1, 1904. It was concluded for a term ending on June 30, 1907; and, in case there is no written objection to its continuance by any member before December 31, 1906, it is to stand until June 30, 1912. The character of this agreement, in respect to matters of general interest, is substantially as follows:³—

The steel-works owners in the combination have an agreement whereby they obligate themselves to sell certain products to their central company, which is called the Stahlwerksverband. They agree further to meet in a general assembly to perform certain duties imposed by the

¹ Cf. *Geschaefte-Bericht Phoenix, 1903-04.*

² Liefmann, "*Zur heutigen Lage der deutschen Grosseisenindustrie*," *Conrad's Jahrbuecher*, November, 1905.

³ This statement is based on the text of the agreement and a condensed exposition thereof submitted to the government by the Steel Syndicate. Cf. *Enquete, S.V., Anlage 5.*

agreement on that body, and also to submit to the directions of certain organs provided for in the agreement. The Stahlwerksverband, or central company, has, on its part, an agreement with the steel-works owners to purchase all of their products, of the kinds specified, and to sell them again under the terms fixed by the agreement. The Assembly of the Steel-works Owners elects an Advisory Council (*Beirat*), a body called the Commission, and several subordinate commissions. The Stahlwerksverband has the usual statutory organs of a company; namely, Supervisory Council, Managing Directors (*Vorstand*), and General Assembly. In the Assembly of Steel-works Owners each member has one vote for every 10,000 tons quota of production. Some of the chief powers of this body are: (1) election of *Beirat* and Commission, (2) admission of new members, (3) determination of eventual restriction of quotas, (4) assent to sales or leases of plants by owners, (5) determination of penalties, (6) dissolution of agreement in case of reappearance of competition, and (7) provision for the inclusion of light rolled products (B-Products) in syndicate sales. The *Beirat* is composed of members elected by the Steel-works Owners, each owner or group of owners having the right to elect one member for every 500,000 tons of quotas. The members of the *Beirat* must be chosen from the General Assembly. The chief powers of the *Beirat* are (1) holding members of the combination to their agreement, (2) provision of rules regarding selling prices and terms of sale, (3) determination of increase of quotas for B-Products (see below), (4) determination of prices to be paid the Steel-works Owners, (5) disposition of reserves, (6) imposition of penalties, and (7) authorization to *Vorstand* to conclude agreements with competitors, etc. The third organ of the cartell is the Commission, which is composed of eight members, and which has the following powers: (1) classification of commodities, and (2)

determination of "scale prices," comparative weights and compensation for unusual specifications. Among the subordinate commissions the freight commission may be specially mentioned.

The selling company is called the "Stahlwerksverband, Aktiengesellschaft." It is located in Düsseldorf. The purpose of the company, as described in the by-laws, includes not only the purchase and sale of iron and steel products of all kinds, but also the acquisition and operation of all kinds of enterprises which are connected with the storage and transportation of iron and steel products. This company has a share capital of 400,000 marks in registered shares, which are not transferable without the consent of the General Assembly. This capital is nominal in amount, because the company, although it does an enormous business,¹ is, in effect, only an agent of the Steel-works Owners, and sells for cash. The Managing Directors, or the *Vorstand*, conduct the business of the company, which has a very large and highly organized bureau. There is one department for accounting, statistics, taxation, freights, legal work, and for dealing with the public authorities, and a department for the sale of each of the three kinds of heavy rolled products.

The commodities covered by the agreement are specifically described. They include (1) the production of crude steel and forge iron; (2) the purchases of the same, and also of rolled half-products and products enumerated under the two following specifications; (3) the production of half-products, railway material, and structural steel; (4) the production of bars, rods, heavy and light sheets, tubes, railway axles, wheels and tires, forge pieces, cast steel pieces, etc., so far as not made from material under 3 and 4, but directly from crude steel; and (5) the purchase

¹ The sales in the first year, which did not comprise the whole output, were about \$62,000,000. Cf. *Iron and Coal Trades Review*, September 15, 1905.

from Steel-works Owners of commodities enumerated under 3, if they are for the plants of the Steel-works Owners, and if the products thereof are sold by the cartell. The products enumerated under 1 and 3 are called A-Products, and those under 4 are called B-Products. The Stahlwerksverband buys from the Steel-works Owners all the products which are offered for sale under the group A-Products, and sells the same for the general account. For B-Products, on the other hand, the amount of production is fixed, but the sale is left to the Steel-works Owners individually, or to such other cartells as they may belong to.

The quotas of the Steel-works Owners for the A-Products sold by the Stahlwerksverband are based on the amount of crude steel originally allotted to each by the agreement. This is called the principal quota, and is divided into three "group quotas"; namely, (1) crude steel and half-products for direct sale, (2) railway material, and (3) structural steel. The group quotas are given in crude steel equivalents. It is the duty of the selling company to distribute the orders so that each concern shall have its share according to its quotas. There are various particular provisions in this connection. If the total of the quotas is increased, they must all be increased in proportion; but, if any concern is unable to maintain the increased output allotted to it, the works which produce the excess are required to pay those which produce less a contribution of 5 marks per ton. Certain exchanges in quotas between different plants are allowed, with the consent of the Vorstand, and it is also provided that the Vorstand can make arrangements whereby certain works shall receive the bulk of orders for unusual specifications. Both these provisions aim at a greater economy of production by a division of labor. Each Steel-works Owner must fulfil orders allotted him; but, in case they involve changes in his equipment, compensation must be made. Where a concern uses its

own products, the Stahlwerksverband does not intervene as a buyer or seller.

The selling prices are fixed by the Vorstand under the guidance of rules laid down by the Beirat. The Steel-works Owners receive a minimum price ("table price") originally, and afterward what excess remains from the actual proceeds after deduction of the various expenses of administration, reserve, rebates, etc., incurred by the selling company. It is evident that the only way open for any particular concern to increase its profits is to reduce its costs of production. The "table prices" are for Thomas or basic Bessemer steel. Extra prices are allowed for commodities of superior grade, based on the extra proceeds of sale. A particular concern may receive higher prices than others if it is clear that its product commands a higher price in the market on account of quality. Important features of the price regulation are the freight-basing points. In the domestic trade the rules are as follows: for half-products there are five bases, and the purchaser is quoted a price from the base nearest to his works; for railway material the base is the producing concern; for structural steel the base is Diedenhofen. In the foreign trade the basing point is the plant most favorably located for the purchaser. These rules represent partly compromises between different interests in the combination and partly attempts to economize freight charges. For the foreign trade, for example, each concern has the advantage or disadvantage resulting from its geographical situation with regard to the destination. In domestic railway material, on the other hand, geographical situation has no effect. Export bounties which are received from other cartells (*e.g.*, Coal Syndicate or Pig Iron Syndicate) are distributed in such a manner that the Steel-works Owners who make the commodities for which export bounties are received get their share thereof, whether their products are exported or not.

For the B-Products the principal quota is the weight of crude steel required to make them. This is fixed for each concern in the original agreement. A concern can reduce its sale of B-Products at will. On the other hand, it cannot increase its sales without leave from the Beirat. If a concern sells more than its allotted quota, it must pay 20 marks per ton for such excess sales.

The agreement provides for a "reserve," which is intended principally for the promotion of the export trade or for fighting competitors. It is acquired by deductions made from the proceeds of sale on the basis of the "table prices." This assessment is fixed by the Assembly of Steel-works Owners, with the limitation that it cannot exceed 3 per cent. of the sums paid under the "table price" payments. The Steel-works Owners are prohibited from selling or leasing their plants without the consent of the Assembly of Steel-works Owners, but this assent must be given if proper guarantees are provided for the fulfilment of cartell obligations. On the other hand, the Steel-works Owners are forbidden to buy or operate any outside plant that makes A- or B-Products or to erect new plants for the production of those commodities. The Vorstand has the right to supervise all concerns, and to inspect plants, books, and papers, in order to insure due performance of obligations. Detailed provisions are made regarding fines and penalties. An arbitration court is established also, which (to the exclusion of the courts of law) has jurisdiction over disputes concerning the obligations of the parties to the agreement. In case new competition appears during the term of the cartell with a production amounting to 5 per cent. of the cartell in A- or B-Products, according to the opinion of the Beirat, the agreement may be cancelled.

The original quotas of the members of the Stahlwerksverband for different products are shown in the following table:—

In addition to the quotas given above, certain concerns have the privilege of purchasing a fixed amount of steel. The only important allowance is that of Phoenix, which amounts to 100,000 tons. Besides this certain other works are to receive in the future certain additions to their quotas. Here, again, there is only one case in which a considerable increase is provided for; namely, Krupp, which by April, 1907, will be allowed 706,000 tons for its total quota.¹ Taking the total quotas, the geographical distribution is as follows: for the Rhenish-Westphalian works, 54 per cent.; for the works in the Saar, Lorraine, and Luxemburg, 32 per cent.; for Upper Silesia, 7 per cent.; and the remainder (7 per cent.) in various parts of Germany.²

The proportion of the production of the Stahlwerksverband to the total production of Germany is estimated at about 90 per cent.³ All the important steel works which were deemed to come within the scheme of organization except one—the Westfälische Stahlwerke—are included in the agreement. Several works have been added since then. There does not seem to be any immediate likelihood of new competition appearing. To start a new first-class steel works with an independent supply of coal and coke would cost, it is said, fifty million marks.⁴ Voelcker says, "The German Stahlwerksverband represents for the cartells in the iron industry, not the keystone of the arch, but rather the foundation of a new grouping."⁵ The chief purposes of the cartell are officially stated to be (1) the maintenance of the domestic market, (2) the full occupation of the works, (3) the simplification of working programmes

¹ *Jahrb. f. d. O. Dortmund*, 1901, -04, pp. 720, 721.

² *Ibid.*, p. 722.

³ Voelcker, "L'État actuel de l'industrie sidérurgique allemande et sa organisation," *Revue économique internationale*, Décembre, 1904, p. 742.

⁴ *Enquete*, S.V., p. 16.

⁵ Voelcker, *Revue écon.*, Décembre, 1904, p. 744.

of the works, and (4) the elimination of competition among German works in foreign markets.¹ Adolf Kirdorf was elected as the first head of the Syndicate.²

It is difficult to estimate the capital value of the concerns in the Steel Syndicate. They include, of course, besides steel mills, coal mines, coke works, blast furnaces, etc. If the share capital at the market quotation is taken, and to this is added the outstanding funded debt, a fairly representative figure is obtained. On this basis, using figures chiefly for 1904, the following computation has been made from data in the *Dortmunder Jahrbuch* and *Saling's Boersenpapiere*. For twenty concerns in the Syndicate, embracing 63 per cent. of the total quotas for A- and B-Products, the total capital value is computed to be about 958.27 million marks. If the same proportion be applied to the aggregate quotas of the syndicated concerns, the total capital value would amount to 1,521 million marks, or about \$362,000,000.³

The Steel Syndicate aimed at a national organization of the industry, and several concerns in Upper Silesia were included in the combination. The steel producers of that region, however, went further, and established a local organization, which in some respects was more complete than the Steel Syndicate. The distance of Upper Silesia from accessible markets makes it necessary for the steel works to manufacture the finer products which pay better for distant shipment. The German Rolling Mill Cartell, which was dissolved in the early nineties, left behind it in Silesia a local cartell which included all but one concern, and this organization lasted down to the end of 1904. It was, however, inadequate, and hence some of the Silesian works joined the Steel Syndicate. This led to the or-

¹ *Enquete, S.V.*, p. 37.

² *Stahl u. Eisen*, 1904, p. 331.

³ Jutsi, taking the par value of the capital stock, the reserves, and the bonded debts, estimates the total capital invested at 1031.5 to 1041.5 million marks. *Die deutsche Montanindustrie auf dem Wege zum Trust*, Jena, 1905, p. 31.

ganization of a local steel combination¹ on December 16, 1904, which went into effect at the beginning of 1905. This was called the Oberschlesische Stahlwerksverband G. m. b. H.² It includes the eight steel works of Upper Silesia, one in Berlin, and one in Danzig. The term of the agreement is fixed from January 1, 1905, to June 30, 1907, although an earlier dissolution was possible under certain contingencies. The agreement in its general form is modelled on that of the greater Steel Syndicate, but it differs in one very important particular. As there is little of crude steel or heavy rolled products made for sale, these are not syndicated, but the light rolled products are cartelled instead. Some of these light rolled products are sold by the syndicate, but the others are simply regulated as to output.³ There were some difficulties in the beginning which threatened to break it up, but these were settled,⁴ and soon after the five remaining steel works in Upper Silesia became members of the larger or "German" Steel Syndicate.⁵

One of the characteristic developments of industrial combinations has been the suppression of the middlemen. The Steel Syndicate furnishes some striking illustrations of this fact. Before the formation of the syndicate the dealers in structural steel had been organized in five groups by the Beam Syndicate and,⁶ these groups were recognized by the Steel Syndicate after it was established. The members of these groups of dealers agree to sell according to certain minimum prices and conditions, and each group has a distinct territory. Similar organizations have been

¹ Cf. *Enquete, S.V.*, Anlage 4.

² G. m. b. H. is the abbreviation for "company with limited liability."

³ *Enquete, S.V.*, Anlage 2; *Deutsche Industrie-Zeitung*, December 30, 1904, p. 475.

⁴ Cf. *Kartell-Rundschau*, 1905. pp. 270, 374, 428.

⁵ *Ibid.*, p. 490.

⁶ *Deutsche Industrie-Zeitung*, January 22, 1904, p. 34.

formed in Switzerland, Denmark, Sweden, and Norway.¹ The Steel Syndicate declares that its special purpose in promoting and recognizing them has been to obtain a better view of the market, and to exercise a greater control over it.² The dealers have submitted to the inevitable with what grace they could, but they complain that the profit (a commission practically) is too small.³ For the other products, which the syndicate sells directly,—namely, half-products and railway material,—the conditions of trade are different; *i.e.*, they are both sold direct to the consumers in the domestic market, and also to some extent abroad. In the most important foreign market of the syndicate,—namely, London—the former agents of the various companies have been organized into a limited liability company over which the syndicate has taken pains to secure complete control, both of *personnel* and stockholders.⁴ Similar agencies have been established to represent the syndicate in Amsterdam and at Brussels. Further, in order to get a better view of the English market, the syndicate has stopped selling *f. o. b.*⁵ Continental ports, and sells instead *c. i. f.* English ports.⁶ The syndicate has even introduced sales with delivery at works to the English consumer.⁷

It would be difficult to appreciate properly the policy of the Steel Syndicate, especially on account of the brief term of its existence, without some reference to the previous movement of production and prices. Before speaking, however, of any particular feature, it is desirable to note a few of the leading facts regarding the steel market

¹ *Enquete, S.V.*, Anlage 5, p. 44; *Deutsche Industrie-Zeitung*, June 17, 1904, pp. 226, 227.

² *Enquete, S.V.*, Anlage 5, p. 44.

³ *Ibid.*, p. 22.

⁴ *Deutsche Industrie-Zeitung*, May 27, 1904, p. 198; *Kartell-Rundschau*, 1904, p. 532.

⁵ "Free on board" at port of shipment.

⁶ "Cost, insurance, and freight"; *i.e.*, price delivered at port of destination.

⁷ *Enquete, S.V.*, Anlage 5, p. 43.

in recent years. The period since 1895 may be approximately described as follows: From 1895 to 1900 there was a great boom, which culminated in a short period of high prices in 1899-1900, and terminated in a crisis in the latter year, which brought on a general and very serious collapse. A period of depression followed, which may be said to cover the years 1901 to 1902.¹ During 1903 improvement was evident, and since then the steel trade has been active, if not, generally speaking, remarkably profitable. The last half of 1905 has brought an extraordinary revival of activity.

The raw material cartells had established themselves at the beginning of the period, and occupied a favorable position throughout. The cartells which existed in finished products were generally more loosely formed, and their policy both in production and prices was less conservative. When the depression came, they were in a weak position, and were more eager to form combinations. The raw material cartells had, however, the advantage, and succeeded in shifting the greater part of the losses occasioned by the hard times on to the manufacturing branches. The former were able, that is, to maintain their prices to a large extent, while the latter had to reduce theirs, and to accept greatly diminished margins. The general policy of all producers was to keep up their production, and to sell abroad at any cost what they could not find a market for at home. The following table shows the movement of production in some leading lines:—

¹ Cf. Walker, pp. 56-77.

PRODUCTION OF PIG IRON AND CERTAIN IRON MANUFACTURES IN THE GERMAN CUSTOMS UNION, 1895-1904.

[IN THOUSANDS OF TONS: TOTAL 5,465 = 5,465,000 TONS.]

Year.	(1) Pig Iron.	(2) Cast-iron Wares, Second Cast- ing. ¹	(3) Half-products (from Converter or Siemens-Mar- tin) for Sale.	(4) Rails.	(5) Finished Prod- ucts (from Con- verter or Sie- mens-Mar- tin.)	(6) Wire Rods (from Converter or Siemens-Mar- tin.)	(7) Tin Plate.
1895	5,465	1,146	1,132	495	2,830	502	31
1896	6,373	1,345	1,358	583	3,462	549	34
1897	6,893	1,440	1,373	799	3,893	513	31
1898	7,313	1,573	1,428	819	4,358	476	35
1899	8,143	1,768 ²	1,508	808	4,820	512	34
1900	8,521	1,785	1,536	922	4,757	457	31
1901	7,880	1,603	1,648	849	4,486	523	36
1902	8,530	1,606	2,230	945	5,101	574	42
1903	10,018	1,704	2,412	1,080	5,802 ⁴	—	45
1904	10,058	1,987	2,374 ³	—	5,976	—	48

Columns (1), (2), (5), *Jahrb. f. d. O. Dortmund* 1901-04, p. 728. Columns (3), (4), *Enquete, S. V., Anlage 7*. Column (6), *Enquete, VIII., p. 717*. Column (7), *Enquete, IX., p. 161*.

¹ Excluding trifling production in Luxemburg, except in 1904.

² *Jahrb. f. d. O. Dortmund*, 1901-04, p. 728.

⁴ Excluding 135,600 tons in Luxemburg.

³ Obvious error in original corrected.

An inspection of this table shows a great increase between 1895 and 1900 for all the products given, except rods and tin plate. The decrease in production in 1901 is equally general, with a slight recovery in 1902. With 1903 production quite generally forged ahead of previous figures, and has continued to increase since. The steadiness with which production has increased in Germany is remarkable. Voelcker states that the normal increase in the demand for steel in Germany is about 420,000 tons per annum.¹ The pig iron production in Germany during the nine years ending 1904 increased at an average rate of 510,000 tons per annum. The production of pig iron in 1904 showed practically no increase over 1903, while half-products declined slightly.

The production policy of the Steel Syndicate during the period of two years since its establishment has not been characterized by any extraordinary features. The syndicate has published the statistics of production only for A-Products. The shipments of these products (reckoned in crude steel weight) were as follows:—

March 1, 1904, to February 28, 1905	
(12 mos.)	4,533,805 tons, A-Products
March 1, 1905, to December 31, 1905	
(10 mos.)	4,517,512 " "

The production of the first business year was about 1.4 per cent. less than the quotas prevailing for that period. The production for the first *eight* months of the second business year, however, was about 9.9 per cent. greater than the prevailing quotas for that period.² For the chief subdivisions of A-Products the shipments, reckoned in crude steel weights, were as follows:³—

¹ Voelcker, *Revue econ.*, Décembre, 1904, p. 732.

² Cf. *Enquete, S.V.*, Anlage 5; *Glückauf*, 1906, p. 82; *Stahl u. Eisen*, 1905, p. 1385.

³ Cf. *Enquete, S.V.*, Anlage 5; *Glückauf*, 1906, p. 82.

<i>Period.</i>	<i>Half-products.</i>	<i>Railway Material.</i>	<i>Structural Steel.</i>
March 1, 1904, to February 28, 1905 (12 mos.) .	1,599,598 tons	1,394,623 tons	1,529,435 tons
March 1, 1905, to December 31, 1905 (10 mos.) .	1,661,649 "	1,399,960 "	1,455,903 "

Comparing the same periods, the shipments during the first ten months in the second year exceeded the shipments during the first ten months of the first year as follows: for all A-Products by 18 per cent., for half-products by 23 per cent., for railway material by 20.4 per cent., and for structural steel by 11 per cent. The production policy of the syndicate as indicated by these figures shows a decided tendency towards expansion. It is instructive to compare the policy of the Steel Syndicate with the Half-products Syndicate which preceded it. The following figures for half-products are in *finished weights*:¹—

<i>Period.</i>	<i>Sales of Half-products, Finished Weights.</i>
March 1, 1902, to February 28, 1903	1,460,637
March 1, 1903, to February 28, 1904	1,449,698
March 1, 1904, to February 28, 1905	1,411,903

The sales in 1904-05, under the régime of the Steel Syndicate, were less than those of the Half-products Syndicate. This reduction came out of the export trade, and not out of the domestic supply, as is shown by the following table of domestic sales:²—

<i>Period.</i>	<i>Domestic Sale, Half-products, Finished Weights.</i>
1902-03	737,621 tons
1903-04	844,629 "
1904-05	1,018,277 "

The data regarding the movement of B-Products are very meagre. The syndicate does not generally give out these figures. Kollmann, however, gives a statement of

¹ *Enquete, S.V., Anlage 5.*

² *Ibid.*

the shipments of B-Products during the first year of operation, together with the quotas, as follows:¹—

<i>B-Products.</i>	<i>Shipments.</i>	<i>Quotas.</i>
Bars	1,718,211 tons	1,847,622 tons
Rods	371,713 "	434,230 "
Sheets	682,889 "	714,927 "
Axles	306,599 "	351,546 "
Tubes	48,226 "	53,400 "

At the end of March, 1905, the syndicate voted to increase the quotas for bars and sheets by 5 per cent. This increase became permanent on July 1, 1905.² The total allotment for A-Products on July 1, 1905, was 4,864,485 tons, as compared with 4,614,225 tons shortly after the formation of the combination. The addition of five more concerns in Upper Silesia increased the total to 4,900,000 tons.³ In January, 1906, the quotas for bars and sheets were increased again by 5 per cent., while the quotas for rods were increased 10 per cent. The total increase of quotas over the original quotas are as follows: bars and rods, 10 per cent.; sheets, 15 per cent.⁴

The movement of prices in the steel trade has been affected in an important degree by the existence of cartells for the various products, but their influence on prices has been very unequal, and none of them ever had complete mastery of the situation. The following table shows the general course of development for the chief raw materials and the chief manufactured products during recent years:—

¹ Kollmann, p. 12.

² *Ibid.*, p. 31; cf. *Kartell-Rundschau*, 1905, pp. 193, 194, 367-372.

³ *Iron and Coal Trades Review*, December 15, 1905, p. 2022.

⁴ *Deutsche Industrie-Zeitung*, January 26, 1906, p. 45.

PRICES OF IRON, IRON PRODUCTS, AND RAW MATERIALS
(In Marks.)

Year.	(1) Minette Iron Ore.		(2) Blast Furnace Coke.		(3) "Fett" Coal Mine-run.		(4) Thomas Pig Iron (Westphalia).		(5) Mill Iron (Silesia).		(6) Thomas Ingots Crude.		(7) Thomas Billets.		(8) Rails.	
	Jan. per ton.	Aver. per ton.	Jan. per ton.	Aver. per ton.	Jan. per ton.	Aver. per ton.	Jan. per ton.	Aver. per ton.	Jan. per ton.	Aver. per ton.	Jan. per ton.	Aver. per ton.	Jan. per ton.	Aver. per ton.	Jan. per ton.	Aver. per ton.
1895 . .	3.30	11.00	8.00	45.63	8.00	57.5	72	75	—	—	—	—	—	—	—	—
1896 . .	3.30	12.02	8.25	54.56	8.25	61.7	81	84	—	—	—	—	—	—	—	—
1897 . .	3.40	13.87	8.55	59.50	8.55	61.7	81	84	—	—	—	—	—	—	—	—
1898 . .	3.55	14.37	9.08	60.00	9.08	61.7	81	84	—	—	—	—	—	—	—	—
1899 . .	3.55	14.37	9.37	70.26	9.37	75.7	87	106	—	—	—	—	—	—	—	—
1900 . .	3.90	21.29	10.25	{ 91.26 to }	10.25	90.7	117	125	—	—	—	—	—	—	—	—
1901 . .	4.40	22.00	10.25	{ 77.90 to }	10.25	66.5	97	78	—	—	—	—	—	—	—	—
1902 . .	2.85	15.00	9.40	60.20	9.40	60.8	75	82.50	—	—	—	—	—	—	—	—
1903 . .	—	15.00	9.38	57.13	9.38	60.8	75	82.50	—	—	—	—	—	—	—	—
1904 . .	—	15.00	9.38	57.21	9.38	—	77.50	77.50	—	—	—	—	—	—	—	—
1904 . .	—	—	—	57.50	—	—	—	—	—	—	—	—	—	—	—	—

Year.	(9) Beams.		(10) Bars.		(11) Rods.		(12) Boiler Plates.		(13) Light Sheets.		(14) Tin Plates.	
	Jan. per ton.	July per ton.	Jan. per ton.	July per ton.	Jan. per ton.	July per ton.	Jan. per ton.	Aver. per ton.	Jan. per ton.	Aver. per ton.	Jan. per ton.	Aver. per ton.
1895 . .	—	—	95	95	93	93	152.50	152.50	{ 121.67 to }	292.3	—	—
1896 . .	90	98	105	120	107	112.50	171.66	171.66	{ 128.60 to }	301.2	—	—
1897 . .	103	105	130	130	122.50	112.50	179.79	179.79	{ 142.08 to }	292.9	—	—
1898 . .	108	108	117.50	120	123	123	186.25	186.25	{ 127.08 to }	289.2	—	—
1899 . .	108	120	132.50	120	125	125	195.00	195.00	127.10	289.4	—	—
1900 . .	130	140	185	160	135	135	210.42	197.50	184.00	329.0	—	—
1901 . .	120	120	185	160	140	140	180.00	180.00	187.50	329.4	—	—
1902 . .	105	112.50	120	105	120	120	180.00	180.00	180.00	340.6	—	—
1903 . .	105	105	105	112.50	120	120	180.00	180.00	140.17	358.0	—	—
1904 . .	105	105	105	110	125	120	180.00	180.00	135.88	358.0	—	—
1904 . .	105	105	—	—	112.50	112.50	151.00	151.00	125.00	331.3	—	—

Column (1), Besselmann, pp. 37, 38, 42. Columns (2), (3), (4), (12), (13), *Jahrbuch f. d. O. Dortmund*, 1901-04, pp. 696, 783 (iron prices in 1901 nominal). Column (5), Kuh, p. 232. Columns (6), (7), (8), (9), *Engels, B. V., Anlage 7* (ralla, domestic prices at Düsseldorf). Column (10), Voelcker, *Bericht*, pp. 130, 131. Column (11), *Engels, VIII*, pp. 742-747. Column (14), *Engels, IX*, p. 182.

This table does not present, of course, the details of price movements, and, in general, it does not show the extremes. For example, pig iron was quoted as low as 45 m. in 1901.¹ In Silesia sheets were from 205 to 215 m. at the beginning of 1900, and from 125 to 135 m. at the end of the year.² To a very considerable extent, also, rebates were granted on the prices quoted, and even on the material previously sold. Most of the coke was sold for 1900 and 1901 on two-year contracts at 17 m.; and, though the market quotations ran higher, very little was bought on that basis.

An inspection of the price table shows that there was a general advance in prices from 1895 to 1900. The crisis developed in the middle of the latter year. The advances appear quite as early for the manufactured products as for the raw materials, and, on the whole, it may be safely asserted that they were the result of general economic influences, and that there was no causal relation between them. Dr. Voelcker, in his impartial and judicious summary of the situation, declares that from 1895 to 1898 the cartells followed a moderate price policy, but that from 1899 to 1901 the reverse in general was true.³ The uncartelled lines got high prices in 1899 and 1900, owing to the favorable market, and the cartelled lines were unable to resist the temptation to put up their prices to an immoderate height also. The fall in prices, after the depression set in, was relatively greater for the manufactured products than for raw materials or half-products, and it came sooner. This was partly due to the fact that the raw material cartells took advantage of their strong po-

¹ Cf. *J.-B. d. Handelskammer Oppeln*, 1901, p. 30; Wieser, "Die rheinisch-westfälische Eisenindustrie in der gegenwärtigen Krise," *Jahrb. f. Gesetz. Verwalt. u. Volksw.*, Jahrg. 1902, p. 304.

² *J.-B. d. Handelskammer Oppeln*, 1900, p. 29.

³ Voelcker, *Bericht*, p. 23. Cf. Vogelstein, *S. d. V. f. S.-P.*, p. 86. Dr. Voelcker at that time was in the government service, but since then he has become a director of the Steel Syndicate.

sition to make their customers take their supplies on long-term contracts; but the latter were also to blame, as they were over-anxious to get supplies, not suspecting that a crisis was imminent.¹ The two chief offenders were the Coke Syndicate and the Pig Iron Syndicate.² The Steel Syndicate, at the beginning of its operations, established a scale of domestic prices for certain standard products of basic steel. The most important prices were as follows:³—

Crude ingots	77.50 m. per ton
Rolled ingots (blooms)	82.50
Billets	90.00
Sheet bars	92.50
Structural iron	105.00–108.00
Rails	112.00
Ties	105.00

These prices prevailed without essential modification until November, 1905. A comparison of these prices with those of the years immediately preceding (1902 and 1903) and the years before the boom acquired much headway (*e.g.*, 1896 and 1897) tends to show that the price policy of the Syndicate has been moderate. English reports announce, however, a general 5 shilling advance for half-products of the Steel Syndicate in November, 1905, and predict a further rise.⁴ These prices look rather high. The price policy of the syndicate, as far as the domestic market is concerned, was enunciated by one of its directors, Dr. Voelcker, as follows: "We do not intend to allow our prices to change continually with the fluctuations of the market. We do not desire, namely, to raise our prices suddenly and rapidly, if the conditions are very favorable; we do not wish, on the other hand, to reduce our prices

¹ Voelcker, *Bericht*, p. 255.

² Cf. Calwer, *Handel u Wandel*, 1901, pp. 31, 32; Voelcker, *Bericht*, pp. 38–45.

³ *Enquete, S.V.*, Anlagen 3, 5, u. 7. Cf. Kollmann, p. 26. Kollmann gives the price of rails at 118 m.

⁴ *Iron and Coal Trades Review*, November 17, 1905, p. 1687.

in bad times, with a declining demand; we desire to keep the middle course."¹

The syndicate does not fix the prices of light rolled products. The price movement for some of the principal lines is shown in the following table:—

PRICES OF LIGHT ROLLED PRODUCTS.²

(In Marks.)

Date.	Bar Steel (Converter).	Hoops.	Boiler Plate (Converter).	Light Sheets (Converter).	Rods (Converter).
1904.					
January 1 . .	107-110	12.250-127.50	150	115	112.50-117.50
April 1 . . .	112	125-130	155	115	112.50-117.50
July 1 . . .	112-115	122.50-127.50	150	115	120
October 1 . .	110-112	122.50-127.50	150	115	112.50-117.50
1905.					
January 1 . .	106-108	122.50-127.50	150-155	115	112.50-117.50
April 1 . . .	110-115	123	150-155	120-122.50	125
July 1 . . .	110	123-125	—	115-120	125
October 1 . .	110-112	125-127.50	130	112-120	125
December 1 .	112-115	125-127.50	130-135	122.50-125	127.50
1906.					
January 1 . .	115-118	130-132.50	130-135	126-130	132.50

A distinct upward movement is observable in the last half of 1905, to which boiler plate forms an exception. This corresponded to an increase in consumption, especially in the domestic market³. Comparing these prices with those of preceding years, the prices of bar steel were unduly low; and the same is true also for light sheets and for rods in 1904. In 1905 the prices of light sheets moved erratically, and were, on the whole, too low, while the prices of rods advanced to a reasonably good basis. The position of steel bars became tolerably good only at the beginning of the year 1906.

The burning question of the steel trade since the crisis has been the position of the straight rolling mills (*reine Walzwerke*) with reference to the mixed steel works (*gemischten Werke*). The latter are the great

¹ *Enquete, S.V.*, p. 3.² *Glückauf*.³ *Stahl u. Eisen*, 1905, p. 1216.

works which generally have their own raw materials, and combine the manufacture of heavy and light steel products. Though for a time in the seventies and eighties this integration in industry fell into some disfavor,¹ it is accepted to-day in Germany, as elsewhere, as the necessary basis for large and successful operations. Of the 31 original members of the Steel Syndicate, 17 produce coal, 25 iron ore, and 27 pig iron.² These large steel works produce also the bulk of the light rolled products. For example, they produce about three-fourths of the bar steel of Germany.³ Probably the straight rolling mills do not produce over one-seventh. The straight rolling mills are almost entirely dependent on the large steel works for their material, and they are at a disadvantage both in the manufacture and sale of light rolled products. The superiority of the steel works is based on (1) technical superiority, (2) economy in general expenses, and (3) economy in freights. Their technical superiority relates almost entirely to standard commodities, produced in great quantities, and is found chiefly in the economy of fuel and in the economy of construction and operation of plant. Considering these economies only so far as they relate to the rolling of the light products, the straight rolling mills concede that the large works have an advantage of from 4 to 6 marks per ton in rolling crude steel.⁴ It is principally a question of saving heat by direct rolling. It is also obvious that the construction of a plant for a continuous and uninterrupted process is more economical. This factor, as well as that of saving in general expenses, which is equally obvious, is difficult to estimate. The saving in freight is estimated to average $1\frac{1}{2}$ marks per ton.⁵ Not

¹ Cf. Bosselmann, p. 54; Stillich, *Eisen- und Stahlindustrie*, Berlin, 1904, pp. 40, 160, 162; Heymann, pp. 145-148; *Eisen-Enquete-Kommission*, 1878, p. 4.

² *Enquete, S.V.*, Anlage 4.

³ *Kartell-Rundschau*, 1905, pp. 369, 490-492.

⁴ *Enquete, S.V.*, Anlage 3.

⁵ Cf. *Ibid.*, p. 12, Anlage 3.

all the large steel works enjoy these advantages, as they have not all been rationally located and constructed. The commercial advantage of the mixed work rests partly on their commercial and financial preponderance, and partly on their influence over prices and production.

The complaints of the straight rolling mills may be concisely formulated as follows: that the prices of half-products are too high in comparison with the prices of light rolled products; that the steel works, although they control the export, have been dumping half-products; that the export of prices are excessively low; and that the export bounties are insufficient to enable the straight rolling mills to compete with foreign mills using German half-products.¹ Regarding the price policy in the domestic markets, extensive comparisons might be made; but it is sufficient to cite that of Springmann, a leader of the straight rolling mill group, who divides the decade 1895 to 1905 into two five-year periods,—a period of prosperity and a period of depression. The margin between crude ingots and bar steel in the first period was 49.75 m., and in the second 29.54 m. He compares these with the margins between crude ingots and beams, which for the same periods were, respectively, 21.15 m. and 26.60 m., and he claims that the steadiness of the latter was due to the fact that the steel works combinations controlled the prices of beams. A representative of the steel works claimed, on the other hand, that the margins for beams were reasonable, as well as the margin for bars during the second period, but that the margins for bars had been too high in the first period.² On a previous occasion Springmann claimed that a margin of 37.50 m. was necessary between rolled ingots (blooms) and bar steel, while A. Kirdorf

¹ Cf. *Denkschrift zur Lage der Halbesug kaufenden Walzwerke im letzten Vierteljahre 1904: Enquete, S.V.*, Anlage 3.

² *Enquete, S.V.*, p. 23.

(head of the Half-products Syndicate) asserted that 22.50 m. was sufficient.¹ The truth here probably lies near the mean. The rolling mills seem to make a better *prima facie* case in the margins for rods. They cite the cost of rolling rods as given by the Half-products Syndicate as 21 m. The price of billets was 90 m., which, together with 21 m. for rolling and 1.50 m. for freight, makes a total of 112.50 m. The prevailing price for rods, including domestic and export trade and deducting bounties, was 108.21 m. from January to March, 1904, and 107.71 m. from April to June, 1904. They were compelled, therefore, to sell at 4.29 m. and 4.79 m., respectively, below a fair cost of production.² The representatives of the straight rolling mills claimed that the steel works made exorbitant profits on half-products;³ but A. Kirdorf denied it, and offered to prove it from the books of his company. He said that there were great differences in cost, and that the steel works that produced at a disadvantage had as good a claim to have prices adjusted to make their business profitable as the straight rolling mills.⁴

This conflict of interest has not appeared in Silesia, which is due partly to technical conditions and partly to the organization of the industry. A sliding scale has been established between rolled products and pig iron which automatically adjusts the margin.⁵

The Steel Syndicate is incomplete in two important points: (1) the open hearth mills are not in the combination, (2) the B-Products are not syndicated. The bar steel production from the open hearth furnaces is said to be 10 per cent. of the total.⁶ The Steel Syndicate has made strenuous efforts to bring them in, but without success. It is said that they demand exorbitant quotas.⁷

¹ Cf. *Enquete*, VI., p. 410.

² *Ibid.*, pp. 403, 511, 512.

³ Cf. Heymann, p. 313.

⁴ *Ibid.*, S., V., Anlage 3.

⁵ *Ibid.*, VI., pp. 396, 400, 418.

⁶ *Tageblatt*, August 17, 1905.

⁷ Cf. *Deutsche Industrie-Zeitung*, March 17, 1905; *Kartell-Rundschau*, 1905, p. 144.

It has also been active in trying to bring about some *modus vivendi* for the straight rolling mills, which can hardly be brought into the syndicate before the open hearth furnaces. Various schemes have been proposed. Under their present disadvantageous position they have a relatively depreciated value. If they were admitted into the syndicate with reasonable quotas, they would unquestionably be coveted by the large mills, but it is difficult to see how the syndicate works could be induced to give away valuable privileges without a consideration. The straight rolling mills have proposed a sliding scale, but the proposed margins are high.¹ Finally, the syndicate has made a counter-proposal that the straight rolling mills buy half-products at ruling prices, and sell the rolled products to the syndicate with a fair allowance for the cost of rolling.² The syndicate wished to get control of the sale. The syndicate has made some effort to help bring about a separate cartell in bar steel, but the game of cartell politics is complicated, and there were some reasons for going slowly; *e.g.*, securing first the adhesion of the other Silesian mills and the open hearth furnaces.³ The straight rolling mills, according to admissions from their own side, have been quite immoderate in their demands.⁴ Accusations have not been wanting, however, that the Syndicate is really aiming to destroy the straight rolling mills, and to get control of the finished products,⁵ though this is emphatically denied.⁶

The complaints of the straight rolling mills regarding the export policy of the Steel Syndicate concerns a matter of much greater interest to German industry and the world at large. The imports of steel are of minor consequence,

¹ *Enquete, S.V.*, Anlage 8.

² *Kartell-Rundschau*, 1905, pp. 490-492.

³ *Cf. Ibid.*, p. 427; *Enquete, S.V.*, p. 26.

⁴ *Cf. Enquete, S.V.*, p. 26.

⁵ *Deutsche Metall-Industrie-Zeitung*, January 7, 1905.

⁶ *Enquete, S.V.*, p. 3 (Voelcker).

although in the boom period, especially in 1899 and 1900, there was a considerable importation of pig iron and half-products.¹ The exports are shown in the following table:—

EXPORTS OF THE GERMAN CUSTOMS UNION.

[IN THOUSANDS OF TONS: THUS 272 = 272,000 TONS.]

Year.	Pig Iron. ²	Half-products. ³	Finished Products. ³
1898	272	35	1,312
1899	235	23	1,244
1900	191	34	1,355
1901	304	202	1,815
1902	516	636	2,127
1903	418	638	2,281
1904	226	396	2,022

The domestic demand was so keen in 1899 and 1900 that the exports of pig iron declined. It is remarkable that finished products declined also. With the beginning of the depression in the domestic markets producers were led to increase their exports. This is especially marked for pig iron in 1901 and for half-products in 1902. The exports of finished products do not show such a decided increase. The straight rolling mills complained that the steel works were dumping their production in England, both during the régime of the Half-products Syndicate and since the Steel Syndicate was formed. In answer to this charge the Steel Syndicate submitted the following table for domestic and export sales of half-products (finished weights):⁴—

Year.	Domestic.	Per Cent.	Export.	Per Cent.
1902-03 .	737,121 tons	50.50	723,016 tons	47.97
1903-04 .	844,629 "	58.26	605,069 "	41.47
1904-05 .	1,018,277 "	72.12	393,626 "	27.88

The sales in 1904-05 were made during the régime of the Steel Syndicate. The question of dumping applies only to half-products, so far as other branches of the steel

¹ *Jahrb. f. d. O. Dortmund*, 1901-04, p. 734.

² *Voelcker, Bericht*, p. 29.

³ *Jahrb. f. d. O. Dortmund*, 1901-04, p. 734.

⁴ *Enquete, S.V.*, Anlage 5.

industry are affected, because the other A-Products—namely, rails and beams, etc.—are necessarily sold to the consumers in the countries where they are used. National interest, however, is almost equally opposed to dumping these products. The policy of the Steel Syndicate in the sale of all A-Products for the first year of its activity (1904–05) is shown in the following statement ¹ (crude steel weights):—

<i>Commodity.</i>	<i>Domestic.</i>	<i>Per Cent.</i>	<i>Export.</i>	<i>Per Cent.</i>
Half-products . .	1,154,910	72.20	444,688	27.80
Railway Material .	1,049,454	75.25	345,169	24.75
Structural Iron . .	1,174,147	76.77	355,288	33.23

The Steel Syndicate makes unquestionably a favorable showing. It also points out that, though the export of manufactures of half-products has declined somewhat, the decline has not been so great as the decline of half-products.² It is improbable that the straight rolling mills could have so increased their output as to have absorbed all the half-products exported, if they had been given the chance.³ The straight rolling mills complain particularly of the exports to England. Although the Steel Syndicate could show from the official trade statistics there had been a heavy decline in this particular direction, it was well known that in former years a good deal of the English export was reshipped to America, and so a real decline for the English market was not proven. The best argument of the syndicate was that the German half-products did not constitute more than 3.8 per cent. of the total English consumption.⁴

The complaints against the export policy of the steel works were directed against prices quite as much as quantities. Low export prices have always prevailed in the

¹ *Enquete, S. V.*, Anlage 5.

² *Ibid.*

³ *Cf. Ibid.*, pp. 13, 14, 15, 16.

⁴ *Ibid.* Anlagen 3 u. 5.

German iron and steel trade.¹ The reports of the German steel companies frequently admit it.² There is no question that the export prices of half-products have been very low, but various circumstances must be taken into account in estimating the effects. A good deal depends at what point of delivery or sale the prices are compared, and how the freight is reckoned in making comparisons. The rolling mills are apt to compare prices at the producing mills, while the steel works prefer to compare the prices delivered at the respective places of consumption.³ Where export bounties are allowed, they must of course be counted in. In order to discuss this question satisfactorily, it would be necessary to know what the export prices really were, for what quantities they applied, and what proportions of the products made therefrom went to different markets where they really met German competition. The theoretical considerations are intricate, while the information as to the facts is totally inadequate, so that it is impossible to make a very confident statement about the real effects of the low export prices. Lippert, a representative of the straight rolling mills, quoted export prices at Antwerp, f. o. b., at 68 m. for ingots, 72 m. for billets, and 72.50 m. for sheet bars as compared with domestic prices of 82.50

¹ *Eisen Enquete*, 1878, pp. 13, 44, 56, 72, etc.; *J.-B. Handelskammer*, Breslau, 1892, p. 160; Wieser, p. 318; Martin, p. 183; Raffalovich, *Trusts, Cartels, et Syndicates*, Paris, 1903, p. 21, note, etc.

² Cf., e.g., *G-B. Deutsch-Luxemburgische A-G*, 1902-03: "Kaum die Selbstkosten gedeckt werden konnten"; *G-B. Phoenix*, 1901-02: "die Preise äusserst mässig sind, und einen Gewinn ueberhaupt nicht uebrig lassen."

³ Two calculations may be given for illustration, which were offered at the Enquete concerning the Half-products Syndicate. A. Kirdorf gave the following example. Export price for rolled ingots at works to English mills, 76 m.; freight to seacoast, 3 m.; sea freight, 6 m.; total cost, c. i. f. England, 85 m. Domestic price, delivered, 84 m.; export bounty, 10 m.; total cost, delivered, 74 m. Kirdorf figured for each concern delivered. The German concern which exported its finished product to England still had freight to pay. Springmann made his calculation as follows: Export price for billets, f. o. b. Antwerp, 72 m.; freight from Dortmund (producing works), 5.70 m.; net price at works, 66 m. approx. Domestic price, 80 m.; export bounty, 10 m.; net price at works, 80 m. Springmann figured the price at producing works. *Enquete*, VI., pp. 426, 430.

m., 90 m., and 92.50 respectively.¹ These were emphatically declared by the representatives to be exceptional, if made in fact; and that this was before the present syndicate was established. Schaltenbrand, one of the directors, asserted that the export was necessary, and they had to take what they could get. He admitted that the export prices were a little lower than the domestic prices, but he claimed that, if account were taken of the export bounties and other conditions, the domestic mills received the more favorable terms. He also quoted the real average proceeds from the export trade of the Steel Syndicate for ingots, billets, and sheet bars; but these figures were not printed in the published protocol.² Complaints against the steel works have also been made with respect to the prices at which they sold finished products abroad in competition with the domestic consumers of their half-products.³

Space does not permit going into further details in regard to this question. It has become chiefly of historical interest in consequence of the recent vigorous *hausse* in the German steel market, which has resulted in the advance of prices all around and brought the export prices, according to market reports, very close to the domestic prices.⁴

In order to equalize the disadvantage at which the German export industry has been placed with respect to manufactured products in consequence of the low export prices of the raw material cartells, export bounties have been paid from time to time by the latter to such of their customers as were engaged in the export trade. This practice extends back to 1891⁵ in the iron trade, and perhaps earlier. The significance of the export bounty

¹ *Enquete, S. V.*, p. 17.

² *Ibid.*, pp. 10, 18, 20.

³ Cf. *Ibid.*, pp. 15, 16.

⁴ Cf. *Iron and Coal Trades Review*, November 17, 1905, p. 1687.

⁵ *Raffalovich*, p. 23.

system naturally became much greater in the period of depression which followed the crisis of 1900, and it was considerably extended. In 1902 it was systematically organized by the establishment of an "Export Accounting Office" (*Abrechnungsstelle für die Ausfuhr*), in which the coal, coke, pig iron, half-products, and beam cartells united to pay export bounties to each other, and to the mills which made and exported the finer products. These bounties were based on a calculation of the amount of raw material consumed in making the finished product.¹ The general principles established for the payment of these bounties were, first, that they were payable only to members of a cartell, and, second, that the raw materials consumed must be supplied exclusively by the cartells paying the bounties.² At the beginning of 1904, when the Steel Syndicate commenced operations, the bounties were paid according to the following scale:³—

1.50 m.	per ton of coal.
2.50 m.	" " " iron (exclusive coal bounty).
15.00 m.	" " " half-products (inclusive coal and iron bounty).
20.00 m.	" " " structural steel " " " " " "

Except for a slight reduction of the bounty on half-products for a short time these bounties prevailed through 1904 and 1905.⁴ At the end of 1905 the Steel Syndicate decided to grant export bounties only to such cartells as syndicated the foreign as well as the domestic sales, but at the same time they made a very important exception to this, as well as their previous rule; namely, they consented to give a bounty of 7 m. per ton for half-products consumed by the producers of steel bars, although there was no cartell at all in this commodity. This bounty was to begin with the second quarter of 1906. The reason for this exception

¹ *Vide Walker*, p. 223.

² *Wiener*, p. 307; *Vogelstein*, *S. d. V. f. S.-P.*, pp. 119, 120; *Enquete*, *S. V.*, p. 431.

³ *Kartell-Rundschau*, 1904, p. 373; *Enquete*, *S. V.*, Anlage 3.

⁴ *Kartell-Rundschau*, 1904, p. 371; 1905, pp. 145, 318.

was that the establishment of a cartell in bars was deemed practically impossible.¹ If, as has been frequently claimed, there are some influential steel works in the syndicate who have obstructed the formation of a cartell for bars, this measure seems calculated to bring them around somewhat.

In the agreement constituting the Steel Syndicate one of the powers of the Beirat is "the granting of authority to the Vorstand to conclude protective and other agreements." Under this clause the syndicate has made agreements with foreign steel producers, which form a cardinal feature in its policy. Such agreements are by no means an innovation. An international rail pool which existed for a couple of years was dissolved in 1886.² In recent years there have been numerous international agreements in the steel trade, as, for example, rails, beams, rods, heavy sheets, wire nails, enamel ware, pig iron, etc.³ These various cartells include a number of different countries, but particularly Germany's nearest neighbors, France, Belgium, and Austria. The policy of forming international agreements is the logical development of the policy of forming local or domestic agreements, and generally presupposes the latter. In the iron and steel industry combinations of a more or less comprehensive character exist in all the important producing countries, and there is no doubt that the formation of powerful combinations in one country stimulates its rivals to strengthen themselves in a similar manner. To a certain extent, indeed, the formation of the United States Steel Corporation has had an influence in bringing about the formation of the Steel Syndicate in Germany.⁴ The establishment of the Steel

¹ *Kartell-Rundschau*, 1905, p. 692.

² Cf. *Handelskammer zu Bochum*, 1886, p. 13.

³ Besselmann, p. 61; Vogelstein, *S. d. V. f. S.-P.*, p. 121; *Kartell-Rundschau*, 1903, p. 47, 1197; *Deutsche Industrie-Zeitung*, August 7, 1903; Wibaüt, *Trusts en Kartellen*, Amsterdam, 1903.

⁴ Cf. *Gemeinfaßliche Darstellung des Hüttenwesens*, Düsseldorf, 1903, p. 120.

Syndicate not only gave the German producers a greater power and prestige in foreign markets, but it also made it possible for them to make advantageous agreements with their rivals for the elimination of competition. The Steel Syndicate promptly availed itself of this opportunity.

A very circumstantial account of certain of these transactions was published in the *Revue économique internationale* for December, 1904, signed by "un industriel belge."¹ According to this authority a meeting was held at Aix-la-Chapelle in June, 1904, which resulted in the formation of an international beam pool between Germany, Belgium, and France, with quotas of 73.45 per cent., 15.05 per cent., and 11.05 per cent., respectively. This agreement was signed on November 24, 1904. It is to terminate on June 30, 1907.² Central selling offices were established at Düsseldorf, Brussels, and Paris. Negotiations were being conducted at the same time concerning the formation of an international rail pool, which appears to have been consummated on November 28, 1904, to take effect from October 11, 1904. The countries entering this pool and their quotas were as follows: England, 53½ per cent.; Germany, 28.83 per cent.; Belgium, 17.67 per cent.; and France (which came in later), $\frac{4.8}{104.8}$ for the first year, $\frac{5.8}{105.8}$ for the second, and $\frac{6.4}{106.4}$ for the third. This agreement was to terminate on March 30, 1908.³ The central bureau was located in London, besides local bureaus for each national group. Since then the chief American rail producers have joined this international pool. The *Berliner Tageblatt* reported this fact on December 1, 1904, the *Deutsche Industrie-Zeitung* alludes to the fact in its issue for January 20, 1905 (stating that the pool had al-

¹ Le Syndicat International au point de vue belge.

² Cf. Kollmann, p. 47.

³ Cf. *Ibid.*, p. 47; cf. *** "La métallurgie française," *Revue écon. internat.*, Décembre, 1904.

ready received numerous orders), and Kollmann states it also in his account of the Steel Syndicate, giving the American members of the pool as the Steel Corporation, the Lackawanna and the Pennsylvania.¹

Information regarding this agreement and the participation of American interests therein was not very generally known outside the trade apparently, so that on July 1, 1905, the *New York Times* came out with headlines announcing that the European and American producers had divided the world's markets, according to which Central and South America were to be left to the United States,² together with other details. Various statements have appeared concerning the terms of the agreement, but none apparently which bear the evidence of complete and authentic information.³ An article in the *Neue Hamburger Boersen Halle* which seems to have had some special source of inspiration declares that the terms of the agreement, etc., had been kept secret at the express wish of the Americans;⁴ and, in this connection, it may be noted that the directors of the Steel Syndicate refused to discuss or divulge their agreements with foreign producers on the ground that they did not feel authorized to reveal the business secrets of their associates.⁵ Considering only the aspects of this situation from a German standpoint, it is evident that such agreements are of great significance to the steel trade, and a benefit not only to the German steel trade, but also to the whole national economy. For England, which has been the dumping-ground of all nations, the situation is doubtless more complicated; but for Ger-

¹ Kollmann, p. 47.

² In the issue of July 2, 1905, it was stated that the American participants were the United States Steel Corporation and the Pennsylvania, Maryland, and Cambria steel companies.

³ Cf. *Kartell-Rundschau*, 1905, pp. 390, 392, 440; *Deutsche Industrie-Zeitung*, December 9, 1904, p. 432.

⁴ Cf. *Kartell-Rundschau*, 1905, pp. 390, 391.

⁵ *Enquete, S. V.*, p. 10.

many it can hardly be disputed that an arrangement that tended to raise export prices more nearly to a level with domestic prices would be of almost unalloyed advantage. For the straight rolling mills an international pool in half-products would be particularly beneficial; but, although negotiations in this direction are reported, nothing seems to have been accomplished.

In passing judgment on the Steel Syndicate, it must be borne in mind that it is only a torso until the light rolled products (B-Products) are included in its sales. It is probable that this will be accomplished before long, and it is probable also that the process of concentration will not end at that point. It is possible that something more comprehensive than the United States Steel Corporation, though not as large, may be the final result. According to the prevailing German view of industrial organization, combinations, like men, may be "good" or "bad," according as they conduct themselves. Up to the present the Steel Syndicate should be classed, on the whole, as a "good" combination; but it has yet to endure a serious ordeal, although the present *hausse* may show whether it possesses the most difficult and most valuable of cartell virtues,—moderation.

FRANCIS WALKER.

WASHINGTON, February 26, 1906.

THE INVESTMENTS OF HARVARD COLLEGE, 1776-1790: AN EPISODE IN THE FINANCES OF THE REVOLUTION.

QUINCY in his *History of Harvard College* tells at some length the story of how, in 1777, the funds of the college were invested exclusively in notes, bonds, and mortgages, and how a large part of these were paid off during the period of currency inflation which then followed. He further says that those who had the funds in charge invested all the moneys then received in Continental Loan Office Certificates and State Treasury notes; that they watched the shrinkage from day to day of the net values of these investments during the period of the circulation of the Continental currency, but persisted in their purpose, notwithstanding the continued decline in value of this class of securities, even after the abandonment of paper money; and finally were able to record that by a strict and rigid economy and the purchase of public securities from time to time this loss had been made up.¹ There is enough of interest in this experience to justify a review of the principal events connected with it, even though the subject was treated by Quincy with great thoroughness.

In 1777, when Ebenezer Storer, as treasurer of Harvard College, took over the securities of the college, there were no other avenues for investment than real estate and secured and unsecured notes and bonds. Storer's election by

¹ Quincy's *History of Harvard College*, vol. ii., chap. xxxi., p. 238 et seq.

the corporation took place on the 14th of July, 1777, and this action was ratified by the overseers two days thereafter. In the mean time, on the day of his election by the corporation, he had received bonds, notes, etc., belonging to the college which amounted on their face to £16,443 11s. 10d., after which, according to a memorandum entry in the Harvard College Journal, No. 1, he "open'd a sett of books of which the following is the Journal." The first entry in this book is: "State of Massachusetts Bay, September 1, 1777." "Sundry Acc'ts Dr. to College Stock." The first of the sundry accounts is entitled "Securities for Bonds, Mortgages, Notes, etc." Under this heading are grouped in tabulated form details concerning the bonds and notes, to the number of 219,—some of them bearing date as far back as 1752,—in which the college funds, amounting in all, as above stated, to £16,443 11s. 10d., were then invested. "College Stock" was credited and "Interest" debited with accrued interest on these securities to the amount of £3,627 8s. 2d. Following these entries in the journal was a memorandum list of the real estate possessed by the college, together with a statement concerning land grants made by the Assembly, most of which had failed to materialize.

The first journal entry credited "Stock" with all the income-yielding personal property of the college. This being accomplished, the treasurer proceeded to distribute from this account the several funds charged with appropriations of their income for special uses, through an entry making "Stock" debtor to "Sundry accounts for legacies and donations appropriated." These accounts amounted in all to £10,314 7s. 6d. The "Securities" account being charged with all the notes and bonds, "Stock" thus became responsible for the payment from their income of the specific annual appropriations of the gifts and legacies—a fact which caused considerable trouble during the

times of the currency inflation, but which was rectified as soon as it was appreciated.

The current account books of the college were then presumably in Philadelphia in the hands of John Hancock, and the information on which the several legacy and gift accounts were opened was obtained from the books of a former treasurer. A memorandum entry concerning these accounts discloses the fact that "the capital sums pre-neding the year 1750 are put down at one-fifth part of the cominal sum originally given, which is owing to the College Fund sinking for a number of years by the depreciation of the Paper Currency." At the time when this was written, September, 1777, the premium on gold and silver had reached 75 per cent., according to the official scale of depreciation adopted in Massachusetts in September, 1780,¹ and was then particularly active in its upward flight. The warning conveyed by the recent experience of the college, combined with the conspicuous activity at this time of the elements which tended to undermine confidence in the bills of public credit, on which alone the people were then compelled to depend for a medium of exchange, led Storer to open an account, which he termed "Paper Currency," which he made Dr. to all payments of principal and interest on bonds, while, on the other hand, accounts carrying balances on the other side of the ledger were made Dr. to "Paper Currency." In short, he practically substituted this account for "Cash," and ran all his receipts and expenses through it, so that, whatever the fluctuations of the currency, he dealt only with the nominal amount that he actually received or paid out.

The Massachusetts official scale of depreciation shows that the premium on gold and silver, which in September was 75 per cent., had risen in October to 175 per cent. It was on the first of this latter month that a meeting

¹ *Acts and Resolves, Prov. Mass. Bay*, vol. v. p. 1412 *et seq.*

of the president and fellows was held, at which the treasurer stated that he had received a legacy from the estate of Jolin Barnard, deceased, and sundry persons indebted to the college on bonds had paid them off. Further, he expected to receive more payments of the same sort. It was thereupon voted, "That he be directed, after paying the arrears due from the college, to invest all moneys he has or may receive on acc't of the college in Continental Loan Certificates or Treasurer's Notes of this State."¹

In measuring the nature of the step taken by the college authorities in the passage of this vote, we must bear in mind that the Continental Congress had not yet received from the separate States even the semblance of authority grudgingly bestowed four years later by the adoption of the Articles of Confederation. As for the State, its affairs were then being administered by an Assembly composed of a Council and a House of Representatives, the Council having been elected by the representatives for the purpose of carrying on the executive functions of the government in conformity with the provisions of the charter in case of simultaneous absence from the province of the governor and lieutenant-governor. This organization had been effected at the suggestion of the Continental Congress, and

¹ Rev. John Witherspoon, at one time President of the College of New Jersey, in a speech on the Finances in the Continental Congress, made use of the following language: "How many guardians were actually led, or indeed were obliged, to put their depreciated and depreciating money into the funds,—I speak from good knowledge. The trustees of the College of New Jersey in June, 1777, directed a committee of theirs to put all the money that should be paid up to them in the loan office, so that they have now nearly invested all." This hint from another college would indicate that revelations similar to those furnished by the records at Cambridge might be disclosed upon investigation elsewhere. From New Haven, however, I am informed that we cannot expect any help in this line. The abrogation of the Charter of the College, etc., of Philadelphia, in 1779, apparently resulted in the assumption by the State of the custody of the funds of the college, so that, although the college was subsequently reincorporated and merged in the University of Pennsylvania, the continuity of possession of the funds in the hands of the college treasurer was destroyed.

Proper search at Princeton may perhaps add to Witherspoon's contribution, which is extracted from his *Works*, vol. iv. p. 341 (2d ed., Philadelphia, 1802). There is but little to hope from the experiences of Dartmouth or from those of William and Mary.

the semblance of a legal origin for the government had been preserved through the sequence of three provincial congresses, the first having been organized by representatives elected to the Provincial Assembly.

The Continental Loan Offices were established by resolve of Congress passed October 3, 1776,¹ when Loan Certificates to the amount of \$5,000,000, to run for three years and to carry an annual interest of 4 per cent., were offered to the public in lots to suit the purchaser, the minimum certificate to be for \$300. The form of these securities was, as the name indicates, a mere acknowledgment that the United States of America had at such a date received from the lender so many dollars, which they promised to pay on a given day, with interest at the rate of 4 per cent. per annum. February 14, 1776, Nathan Appleton, the Loan Commissioner for Massachusetts, said in an advertisement, "The universal credit of these certificates, and their convenience in carrying on commerce, through the United States, must give them preference to all other notes or bonds"; and in another paragraph he calls them "Certificates or Bank Notes."²

Notwithstanding the alluring features of the certificates as set forth in the advertisement, a 4 per cent. investment did not prove attractive even to patriots who were willing to condone the lack of form and power on the part of the *de facto* government, the borrower. It was therefore resolved in Congress, February 26, 1777,³ that "six per cent. interest should be allowed on all sums which had been borrowed"; and thereafter 6 per cent. per annum was the ordinary rate allowed on Loan Certificates. It may be added also that the minimum amount for the certificates was afterward changed to \$200. September 1, 1777, the date

¹ *Journals of Congress*, vol. ii. p. 398.

² *Boston Gazette*, February 24, March 3, March 10, 1777.

³ *Journals of Congress*, vol. iii. p. 79.

when Storer opened his books, there appeared in the *Boston Gazette* a notice from the Boston Loan Office, bearing date August 25, informing the public that the Loan Commissioner had received a new lot of certificates "with which he is ready to borrow any sum of money on interest at six per cent. per annum, for the United States of America." October 6, 1777, the Loan Commissioner published in the same paper a resolve of Congress of September 10, to the effect that

the interest which shall arise after the date of this resolution of Loan Office Certificates, already issued or which shall be issued before the first day of March next, be annually paid at the respective loan offices in bills of exchange on the Commissioners of the United States in Paris at the rate of five livres of France for every Spanish milled dollar, due for interest as aforesaid, or in Continental bills of credit at the option of the respective lenders.

By comparison of dates it will be seen that at the time when the college corporation voted to invest in Continental Loan Certificates the rate of interest on these securities was 6 per cent., and that Congress had already added to the attractiveness (if the expression is permissible) of this form of investment by agreeing to pay the interest in exchange on France.

The "Treasurer's notes of this State," in which also Storer was permitted to make investments, were most of them for short terms, the longest term notes then on the market being those of the £50,000 loan of May 2, 1777,¹ which were payable May 10, 1782. They all bore interest at the rate of 6 per cent., and were all on a currency basis. Many of the loans were, however, practically currency emissions, the notes being given to borrowers either in ten-pound notes or "in sums not less than ten pounds." Such were the fields open to the college for investment at this time,

¹ *Acts and Resolves, Prov. Mass. Bay*, vol. v. p. 638.

and such, practically, were the only interest-bearing obligations in which the treasurer could place the funds upon which he depended for income.

At such a time owners of real estate producing income would cling to it. Private bonds and notes would inevitably be paid off as they matured during the impending decline of the currency, the imminence of which was impressed upon the treasurer through the memorandum entry in the Journal above quoted, concerning the effect upon the college funds of the paper-money craze of the first half of the century. Moreover, obligations of this kind could not be phrased so as to avoid the Massachusetts legislation of 1776,¹ making it a penal offence to receive or pass Continental bills for less than their face value, or so as to escape the effect of the clauses attached to the currency emission acts making State bills of public credit a legal tender to the same extent as silver or gold.² The good sense of the members of the corporation showed them that, at a time when the involuntary conversion of all or nearly all their notes receivable into currency was impending, the interest-bearing securities of a *de facto* government, even though so inchoate and powerless as the Continental Congress or so incongruous and unwieldy as the General Court, were more likely to be protected than the currency emitted by the same bodies. It was politic, therefore, to convert the currency received by the college into interest-bearing government securities. Duty towards the corporation and patriotic inclinations were coincident.

At the very outset the treasurer was fortunate enough to invest in some of the Loan Certificates, the interest on which was paid in drafts on the Commissioners at Paris. All certificates issued prior to March 1, 1778, came under this heading, and in subsequent legislation were recognized

¹ April 13, 1776, *Acts and Resolves, Prov. Mass. Bay*, vol. v. pp. 472-473.

² *Acts and Resolves, Prov. Mass. Bay*, vol. v. pp. 546, 558, 589, 606.

as being in a specially favorable position.¹ For convenience in converting these interest bills of exchange into currency before crediting his "Interest account," Storer opened in October, 1778, a new account, which he entitled "Bills on France," by means of the entries in which one can learn somewhat about the rise of exchange during the period that the interest on these certificates was thus paid.

In September, 1777, the college funds were, as we have seen, exclusively invested in notes and mortgages. September 1, 1778, the list of investments showed £9,000 in Loan Certificates and £600 in State Treasury notes. September 1, 1779, there were £15,000 in Loan Certificates and £600 in State notes.

The Massachusetts bills of public credit were all called in October 13, 1777, and converted into treasurer's ten-pound interest-bearing notes.² Thereafter for a time the only non-interest-bearing bills officially recognized in Massachusetts were those emitted by the Continental Congress.

March 18, 1780, the Continental Congress, by resolve, acknowledged that the bills of credit were passing by common consent in most parts of the United States at least thirty-nine-fortieths below their nominal value. They declared that silver and gold might be received at the Treasury from the States for the quotas already assessed upon them at the rate of one silver dollar for forty of the bills in circulation, and recommended that new bills should be issued by the several States, redeemable in silver or gold, bearing 5 per cent. interest and guaranteed by the United States,—six-tenths of the emission to go to the States emitting them and four-tenths to the United States,—such bills to be emitted only as the bills in circulation were

¹ September 9, 1782 (*Journals of Congress*, vol. vii. p. 456), in consequence of lack of funds in France the loan offices were ordered to desist from making drafts for interest; but January 15, 1784, Congress resolved that the interest on these certificates was not subject to depreciation, and appointed a committee to devise some means for discharging these loans (*Journals of Congress*, vol. ix. p. 35).

² *Acts and Resolves, Prov. Mass. Bay*, vol. v. p. 734.

brought in and destroyed, and then only on the basis of one of the new for twenty destroyed.

May 5, 1780, the State of Massachusetts, acting in co-operation with the Continental Congress, laid a tax for calling in the State's proportion of the outstanding bills, and authorized the emission of new bills or notes, payable at a fixed future date, in coin and bearing interest at 5 per cent., the same to be indorsed by the general government before emission. Notwithstanding the fact that the legal tender laws hereinbefore referred to were still in force, the notes were made receivable in current payments on the basis of one of the new emission for forty of the Continental bills.¹ The neglect at this time to repeal the law giving a legal tender function to the Continental bills was cured in September, in the act adopting the scale of depreciation for the adjustment of debts, public as well as private, from January 1, 1777, to April 1, 1780.²

We have already followed the investments of the college in Loan Certificates to 1779. There were originally in the "Securities" account 219 private bonds and notes. In 1778 Hancock turned over 5 more, having a face value of £624 17s. 2d., thus raising the number to 224, and bringing up the total value of the securities surrendered by him to £17,068 9s. Of these 110 remained unpaid in August, 1778, at which time the currency was by the scale of depreciation four and one-half for one; and 61 in August, 1779, the depreciation being then a little over sixteen for one. The "Securities" account, including the second delivery of notes, had been reduced at this latter date a little over £13,000, and the balance now stood £4,061 18s. 4d., at which point the fluctuations cease to be of interest. The bulk of the notes had been paid off before the degradation of the currency reached its worst point.

¹*Acts and Resolves, Prov. Mass. Bay*, vol. v. p. 1178.

²*Ibid.*, p. 1412.

As the premium on silver and gold advanced, the college was obliged to protect itself against the rise in prices caused by the inflation of the currency. "Rents unappropriated," which in 1778 yielded £258 1s. 4d., in 1781 had been raised to £16,528 18s. 9d. "College rents," which included "Studies and Cellars," were credited in 1778 £341 4s. 7d.; but in 1781 the amount collected was £18,167 4s. 0d. The charge against the "Salaries and Grants" account for "Assessments"¹ on students was, in 1778, £1,252 9s. 4d., and in 1781 it reached £52,048 15s. 6d. In the summer of 1781 Storer brought such of his accounts as were under his absolute control nominally to a specie basis, and the income from the rent accounts and assessments next year fell respectively to £274 6s. from rents unappropriated, £510 5s. from college rents, and £1,052 15s. 0d. from assessments. Coincident with the nominal increase of income came a corresponding increase of expenditure, and in a similar way the profit and loss item (which, under prudent management, the corporation sought to carry each year to stock) grew, while the currency was being inflated, to proportions which seemed to show that the college was growing rich. The bubble, however, had to be pricked sooner or later, and the adoption of the Massachusetts Depreciation Act in 1780, if it did not actually fix the time, indicated that it was near at hand.

The new emission was put forth in the spring of 1780.² The Massachusetts Depreciation Act was passed in the fall.

¹ The charges against the steward in this account for "Assessments" were probably uniform during this period. In an early entry they were specifically divided among "Tuition, Hollis Professor, Hancock Professor, Library, Gallery, Steward, and Monitors," "Gallery" being for a seat in the town church gallery. The records show that the "Grants" themselves furnish illustration of the currency movements. October 4, 1779, they were put upon the basis of ten for one; November 29, fifteen for one; March 21, 1780, thirty for one; May 9, forty for one; September 15, seventy for one; February 27, 1781, seventy-five for one. The classes which were graduated from 1772-1777, inclusive, averaged forty-four in number. From 1778-1783, inclusive, the average was thirty. In 1784 the number graduated was forty-four.

² May 5, 1780, *Acts and Resolves, Prov. Mass. Bay*, vol. v. p. 1178.

If the bills of the new emission had been received with favor and the terms of the Depreciation Act had been cordially accepted, Storer could have put all his accounts at once on a specie basis. These conditions, however, were not fulfilled. Many States failed to provide for the withdrawal of the portion of the Continental currency assigned to them, and Congress itself exceeded the self-imposed \$200,000,000 limit for the emission of Continental bills. Consequently, many of these bills remained in circulation, under circumstances which compelled their discredit in popular esteem far below the final term in the scale of depreciation; and their decline in turn affected the bills of the new emission. Specie began to come out, and the treasurer had to deal in his accounts with three forms of currency, the relations between which were constantly changing. He hesitated for a time what to do; but in the summer of 1781 he scaled down his accounts through an account termed "Difference of Exchange," by means of credits and debits which expressed the difference between the book entries and the silver value which they represented, no matter what the currency in which the entries were made. He was compelled to adopt some such method as this because the "Paper Currency" account was no longer available, in consequence of there being in circulation two paper currencies, the relations between which fluctuated, and neither of which had any stable relations with specie. By means of the "Difference of Exchange" account and "New Emission" and "Old Emission" accounts, he covered the ground. In July, 1781, he brought the "Steward's" account to a specie basis. The difficulties that he encountered in carrying out the general process will be illustrated by a glance at the method adopted in this particular account.

Caleb Gannett, the steward, was debtor in old emission for £97,012 11s. 2d. This at seventy-five for one rep-

sented £1,293 10s. 0d. in silver. Storer credited Gannett, and charged "Difference of Exchange" with £95,719 1s. 2d., thus leaving the steward's debtor balance expressed in terms of silver value. The steward had taken credit in July for remittances in "New Emission" at four for one, and in "Old Emission" at seventy-five for one; and these credits were extended without reducing the new emission to old emission, the term in which the debtor balance was stated. The complication which this might have produced was avoided by charging Gannett and crediting "Difference of Exchange" with the difference between the sums for which Gannett had actually taken credit and the silver value of the remittances. After these entries the balance of the account was the amount which Gannett owed, stated in terms of silver value. These entries in the steward's account cover dates in May, June, and July. If we turn to the corporation records, we can see what Gannett was contending against. June 8 it was recorded that, when the bills were made out, exchange was seventy-five, but it was then (June 8) much higher. A committee was to reduce the bills to silver, but the steward was to be permitted to receive bills at current exchange. June 19 the steward was directed to receive not less than one-quarter in coin, the three-quarters to be in bills of new emission at three for one. June 28 exchange had increased,—new emission was four for one. July 26 the steward was instructed to receive no more paper money.

In September, 1780, the investments in Loan Certificates reached the sum of £24,090, Massachusetts notes remaining £600. In June, 1781, the Loan Certificates amounted to £28,590.

Up to this date the Loan Certificates received by the college had been subscribed for directly at the loan office, Their values were stated in dollars, and they had been paid for at the rate of one New England pound for three and

one-third dollars.¹ The interest on the certificates issued prior to March 1, 1778, was, as we have seen, paid in drafts on France. On money loaned after that date it was provided by Congress, June 29, 1779,² that until some more accurate standard of value could be devised the interest should be increased in proportion to the sum of Continental paper money which might be in circulation after the date of such loans respectively. April 18, 1780, Congress announced definitely the adoption of the policy of scaling down loans to the current value of the bills when loaned, and June 28, 1780,³ confirmed this by resolving that "the principal of all loans that have been made to these United States shall finally be discharged by paying the full current value of the bills when loaned." At the same time a scale of depreciation was fixed for the purpose of determining this value. In September, 1780,⁴ it was resolved "that the Board of Treasury have power to stop the issuing of all loan certificates under former resolutions of Congress," and a new form of certificate was adopted, stating the value of the money received in Spanish milled dollars.⁵

In 1781 Robert Morris assumed charge of the financial affairs of the general government, and strenuous efforts were put forth to secure money by other means than through loan offices. Certificates continued to be issued in payment for supplies, for interest, and for other purposes by different government officials, but the regular loan certificates were no longer prominent in the market.

¹ It must be constantly borne in mind that we are dealing with the New England pound, and not with sterling money.

² *Journals of Congress*, vol. v. p. 275.

³ *Ibid.*, vol. vi. pp. 100, 101. The resolve of April 18, which is not in the printed *Journal* at the proper date, is recited here at full length.

⁴ *Ibid.*, vol. vi. pp. 178, 179.

⁵ As to Treasury notes during the same period, legislation was effected in January, 1781, for the liquidation of State notes given before April, 1780 (*Laws and Resolves of Mass.*, 1780-1781, p. 6). A scale of depreciation for the consolidation in gold and silver of debts due from the State which were specified in bills of the new emission was passed in November, 1781; and in February, 1785, all outstanding accounts or demands against the State were ordered to be presented for liquidation before January 1, 1786 (*Laws and Resolves of Mass.*, 1784-1785, p. 113).

Storer then turned his attention to State Treasury notes. For three years the college investments in this form had been stationary at £600. It is probable that the small size of the greater part of the Treasury notes may have deterred the treasurer from purchasing them. But now the State was in the field as borrower under the new constitution, and John Hancock was governor. The £600 investment in State Treasury notes in 1780 rose to £833 4s. in 1781. In 1782 it reached £1,387 15s. 8d. In 1783 it amounted to £3,360 18s. 8d.; and in 1784 to £6,656 13s. 9d.

Notwithstanding the greater stability given to the State government by its organization under the new constitution in 1780, we shall find, if we turn to the college "Profit and Loss" account, that, beginning with 1780, the State notes purchased by the treasurer were taken in at a discount. Prior to that time these notes had shared the depreciation concurrently with the currency, but with the attempt to place financial affairs upon a specie basis came the discrimination natural to the situation. The notes of the new emission themselves, payable at a future date in silver, even though they bore 5 per cent. interest, fell at once to three for one of specie, and shortly thereafter to four for one. Profit and loss was credited with £181 6s. 4d. as the discount on Treasury notes purchased in 1781, and with £1,107 12s. 8d. in 1782. Next year Loan Certificates also were purchased, and the discount on both of these securities carried to profit and loss was £2,887 11s. 7d. In 1784 153 Loan Certificates, having a nominal value of \$100,100, were scaled down on the college books to \$25,787, $\frac{3}{4}$ ths, $\frac{1}{4}$ ths, by the application of the Continental scale of depreciation. The difference, \$74,312, $\frac{1}{4}$ ths, $\frac{1}{4}$ ths (equal to £22,293 15s. 6d.), was carried to the debtor side of "Difference of Exchange"; and the reduced valuation, \$25,787, $\frac{3}{4}$ ths, $\frac{1}{4}$ ths (equal to £7,736 3s. 7d.), was carried to the debtor side of a new loan certificate account.

In the face of this shrinkage of nominal values the purchase of government securities was maintained, and in 1785 the discount on these purchases carried to the credit of profit and loss was £4,238 4s. 4d. Here we have the key to the manner in which the funds of the college were saved from the threatened wreck. The notes and public securities which in the earlier stage had been taken by the college because it had no choice were now deliberately selected for investment. The treasurer and those who acted with him may be said to have speculated in the State and Continental funds, or, to state it more carefully, they had faith and foresight which justified them in buying these securities at a time when the political and financial prospects were dark.

In 1787 the treasurer's statement of the college finances shows investments in "consolidated" values amounting to £25,841; but a memorial was then submitted to the State authorities, showing that the entire personal investments of the college actually amounted only to £12,195 7s. 8d., while the amount charged against the stock account for gifts, legacies, etc., appropriated to specific purposes was £14,819 10s. 6d., thus revealing an actual deficit in the stock account of £2,624 2s. 10d. Inasmuch as there had been a surplus of £11,078 3s. 4d. in 1777, it was claimed that this statement showed a clear loss to the college of £13,702 6s. 2d.

The following extract from the memorial to the General Court, from which the above is taken, furnishes an explanation of the manner in which this estimate of the investments was made up:—

It may be thought that this representation should be founded on the apparent and not the real state of the funds; but if it is considered that the stock, if it had been left in its original state, would have enabled them to swell it to at least four times the present appearance, they conceive that they have taken the right method

of calculation. The interest also on what was sunk by the paper currency would in the last eight years have amounted to a large sum, the college having received in eight years in lieu of silver and gold £17,875 8s. 1d. Of this was invested in the public funds £15,600, which, when consolidated, amounted only to £6,070 4s, and will now sell only for the sum of £758 15s. 6d.

This pessimistic report presents the worst possible side of the picture, but it must be remembered that the purpose of the appeal to the legislature was to secure relief from the injury received by the college through the legal tender acts, which had compelled the reception of discredited paper money at face value.

In 1782 commissioners were appointed to liquidate the Continental certificates issued for supplies.¹ In 1786² Congress resolved that

all holders of loan office certificates issued since the first of March, 1778, be and they are hereby authorized to present the same to the loan officer of the State in which such certificates issued in order that the specie value thereof may be liquidated.

In 1787, when the memorial to the General Court was prepared, although it was four years after the signing of the Peace Treaty, the only tie that united the States was the feeble Confederacy. Doubts as to the future perplexed thinking men and discredited government securities. Some person familiar with the details of the memorial to the General Court made the following intrusive entry in Ledger A, under the Profit and Loss Account: "Memorandum. For observations on this Account, see p. 76." The entry to which he thus refers the reader is as follows:

1787, January. From an inspection of the College Books it will appear that since the paper currency stop'd the college has made great profits and a large addition to its stock, but these profits

¹ *Journals of Congress*, February 20, 1782, vol. vii. p. 284.

² February 1, 1786, *Journals of Congress*, vol. xi. p. 20.

are perhaps merely imaginary as they chiefly, if not wholly, arise from having purchased public securities at a large discount which with the interest due on them are estimated on the books at the nominal value, and time only can discover whether these are profits or not, but if these securities are estimated at the present current value the whole college stock would not make good the appropriation as fully appears by the acc't prepared to lay before the general court by their order the next session.

Then follow in a note the figures relative to the values taken from the report, with the added statement that the value there given £758 15s. 6d., is on the basis of 2s. 6d. for 20s. of the "Consolidated" value. Here we have a direct statement as to the market value of the government securities, which had already been reduced under the application of the Depreciation Act. They were worth only one-eighth of the "Consolidated" valuation, or about one-twentieth of the cost price in the degraded currency. On the whole, this was doing pretty well, although it may be inferred that the critic did not think so. The creditors of the college who paid off their obligations in the depreciated currency would have done better by themselves if they had waited a little longer. The time when this memorial was presented to the General Court was, perhaps, the most favorable opportunity they could have selected for a pitiable showing. Next year, 1788, the corporation, after having first authorized the treasurer to invest certain moneys in "private securities," changed their instructions, and authorized the purchase of "public securities," "at four shillings being the current price,"—a rise in value over that given in the memorial of about $7\frac{1}{2}$ per cent. on the face value of the securities. In February, 1790, the treasurer was authorized to take the sum due from his Excellency Governor Hancock, both principal and interest, in Continental securities at ten shillings upon the pound,—a rise of 30 per cent. over the 1788 quotation.

In 1787 and in 1788 the investments in Continental and State securities remained substantially unchanged, the total amount being a little over £22,000. The adoption of the Federal Constitution in 1788 gave assurance that the trials and sufferings of the war were not to be thrown away, and that the obligations emitted by the government would, as afterward liquidated, be somehow cared for. Yet the strain did not yield at once. July 3, 1789, a committee reported to the overseers that the treasurer's statement appeared to be "a just reference to the present state of the College Treasury, but that the public securities, which in this account are estimated at the specie value, would, if reduced to the present cash price, make a difference of at least thirty thousand pounds in the College fund."¹ The "specie value" refers to the valuation set upon the securities when they were scaled down by the scale of depreciation. This term is used occasionally in the records, as are also the phrases "nominal value" and "real value." Apparently, nominal value meant the currency value. "Real value" and "specie value" were probably synonymous, and meant the values assigned at the time when the accounts were scaled down by the scale of depreciation, while "cash price" meant what the committee conceived that the securities could be sold for.

The college investments in Loan Certificates, liquidated certificates, and State notes had in 1789 risen to £30,348 11s. 9d., besides which there was unliquidated past due interest on the certificates amounting to £2,579 15s. 0d., and interest bills £5,410 5s. 4d. Whatever the opinion of the committee who, in the above report, questioned the value of the investments, the treasurer had evidently put all his spare funds in this form of investment.

¹ The total valuation of the property of the college August 27, 1789, in the report from which this statement is extracted, was £48,186 16s. 3d. The condition of the government securities at that time is set forth in the next paragraph in the text.

Then came the establishment of the new government, the inauguration of Washington, and the appointment of Hamilton as Secretary of the Treasury, and his plans for funding the Revolutionary debts. Those who during the dark period of distrust had purchased government funds saw them rise in value far more rapidly than they could have anticipated. Here we may leave the treasurer's books, and turn to the records of the corporation for signs of the times.

On June 16, 1791, it was voted by the corporation "that the treasurer be directed to borrow the sum of three hundred pounds from the Massachusetts Bank to loan to the Bank of the United States; and that the president execute a proper power for that purpose if necessary." Authorizations to transfer funded stock in the Massachusetts Loan Office to the United States Bank were passed November 29, 1791, and again June 7, 1792, these transfers being in payment of a subscription for stock. Such votes as these sufficiently indicate a changed condition of affairs.

In 1793 the accounts were converted from pounds, shillings, and pence into dollars and cents. The system in which the nominal currency was divided into dollars, ninetieths, and eighths, the eighth being practically the unit, finds no lodgment in the treasurer's books except in entries like those dealing with the reduction of securities by the scale of depreciation, one of which has already been described. February 18, 1793, the corporation in a memorial to the General Court stated

that at the beginning of the late war the funds of the university consisted chiefly of bonds; that a paper currency taking place the corporation ordered their treasurer to receive it agreeably to the Acts and Resolves of the Congress and this State and invest the same in Loan Office Certificates and State notes; that they continued to take this money till it had greatly depreciated and on a liquidation of these notes and certificates, when the paper currency stopped, it appeared that one half the stock was sunk; that

by a strict and rigid economy and the purchase of public securities from time to time this loss has been made up.

May 14, 1793, a committee was appointed to wait upon Governor Hancock, and request him to pay the sum due from him to the college. If he could not pay the whole in specie, they were authorized "to take the principal of the debt in funded six per cents. at par." Thus nominal, real, and specie values and cash prices had reached an equality.

Quincy, in reviewing the events hereinbefore set forth, says, "The prosperous condition of the college finances may be especially attributed to three individuals: Ebenezer Storer, James Bowdoin and John Lowell." For an appreciative estimate of the work of these men, and for tabulated statements of the condition of the college funds, the reader is referred to Quincy's great work.

The glimpse behind the curtain which this brief inspection of Storer's accounts has enabled us to take reveals the great responsibility thrust upon the shoulders of the men who then had charge of the college investments, and shows the perplexing nature of their task. Their steadfast trust that a government must be evolved out of the chaos which seemed to be impending after the States had triumphed in the field, alone saved the college from hopeless bankruptcy. Our first thoughts as we watch the conversion of the college funds into a currency which fell in three years from par to forty for one may be in admiration for the master minds which were able to keep any sort of control over a trust fund under such circumstances; but what shall we say of the sagacity which so shaped these investments that within four years after the period of greatest depression it could be said, "This loss has been made up"?

ANDREW MCFARLAND DAVIS.

TYPES OF AMERICAN LABOR UNIONS.—THE MUSICIANS OF ST. LOUIS AND NEW YORK.

It has been a long struggle of the musicians to get themselves looked upon as workers instead of players. Even yet they are not taken as seriously as they wish, though they have practised trade-union methods these ten to twenty years. The contest was first internal; for they could but painfully give up the idea that they were artists, and neither players nor workers. Even conceding that, though artists, they worked hard for their living, the old-fashioned ones contended that they were at least a profession, and not a craft. This internal revolution is the first stage in their history. The second is their growth as a trade union into a more complete control of their business throughout the United States and Canada than that enjoyed by any other large union in the American Federation of Labor.

The former National League of Musicians represented the artistic and professional element. It was organized in 1886 by delegates from musical societies in New York, Boston, Philadelphia, Cincinnati, and Milwaukee. Ten years thereafter it included 101 "locals." Some of these had been in existence several years, the one in New York dating from 1863. The National League had no effective control over the locals, and prescribed no rules binding upon them. Consequently they differed widely in their policies and tactics. The older ones were incorporated under State charters, and held property. Each of them, like the trade unions which they shunned, set up a scale of minimum prices. Likewise they prohibited their members from playing with non-members. But their State

charters made it precarious for them to expel a member who cut the prices or played with outsiders. They were, in fact, in a position similar to that of an association of physicians which adopts a schedule of recommended prices to be charged by its members. They lacked, however, that protection, through limitation of numbers, which comes to physicians and lawyers in the legal certificate of competency based on an apprenticeship of study and an examination.

The younger locals, especially those in the West, were less influenced by the professional element whose centre was in New York. They were organized after the example of the Knights of Labor or the trade unions of the American Federation of Labor. Although the National League had been invited year after year by the Knights and by the Federation to become affiliated, yet it always declined. Had the vote been taken by locals, the invitation would have been accepted; but, by a peculiar system of proxies assigned through a committee after the convention assembled, the vote of these smaller locals, who could not afford to send delegates, was cast by the older locals, and thus New York and Philadelphia were able to control the conventions. Meanwhile the American Federation of Labor had chartered musicians' unions in several localities, with the object of forming them eventually into a national body. To prevent this dual organization local officers of the National League at St. Louis, Cincinnati, Chicago, and Indianapolis joined with the Federation of Labor in 1896 in calling a convention. The invitation was extended to locals of the League, as well as those organized by the Federation. The convention met at Indianapolis, the headquarters at that time of the American Federation of Labor, and included delegates from 18 locals of the League and 9 other locals chartered by the Federation. The fact that these 9 locals contained members suspended from the

League nearly disrupted the convention, since to admit such was inconsistent with the object of preventing a dual organization. But this difficulty was bridged by a formal reply from the Executive Council of the Federation that national bodies once affiliated are guaranteed autonomy in regulating their membership, so that the proposed association would become the sole judge of the qualifications of union musicians throughout the country. With this assurance the American Federation of Musicians was organized, with a charter of affiliation from the American Federation of Labor. It elected as its president Owen Miller, of the St. Louis local, a former president of the National League and still in good standing.

The officers of the League would not be conciliated. At once they expelled every local that joined the new association. But their efforts were futile. Within five months 48 of their 101 locals went over, and in 1902 only 3 locals were left in the old organization. A decision handed down from a Missouri court reinstated the expelled locals and compelled a division of the funds. This was the final blow. The League held its last convention in 1902. "It started at the top, ignoring the rank and file, and finally came out at the bottom." The New York local, the Musicians' Mutual Protective Union, with 4,000 members, held out for a year longer, but was compelled to yield and become "No. 310." At the present time the new organization has 424 locals and 45,000 members. It has brought in practically all instrumental musicians in the United States and Canada who play for a living, either as leaders or as members of orchestras and bands, including all travelling musicians, and excepting only those who are soloists or organists and those members of local companies who play only their own series of concerts. How this has come about will appear from the history of the St. Louis local, which led the movement of organization on trade-

union lines and furnished both the model constitution and by-laws which others have copied and the national officer who has guided the Federation.

A musicians' union is similar to a stock exchange or a produce exchange, and its headquarters are a "pit" where buyers and sellers of instrumental music meet to make engagements. The buyers are "leaders" of orchestras, bands, or concerts: the sellers are the musicians. The buyers are also contractors or agents, who represent, for the time being, the owners or managers of theatres, concert halls, summer gardens, restaurants, parades, pageants, and so on. But, like the broker on the exchange, they must be members of the union if they are to have the privileges of the floor. Like the broker, too, they are prohibited from buying musical talent of those who are not members. Thus the musicians' union, like the stock exchange, is "closed" on both sides,—members only can buy and sell, hence members only can be employers and employed. Every member is entitled to become a "leader," if he can find a client; (that is, if he can find a proprietor or manager who will make a contract authorizing him to furnish musicians). Consequently, like the brokers, a member may be to-day a buyer that is, an employer of his fellow-members, making a contract for their services, and to-morrow he may be a seller, that is, a wage-earner, contracting for his services with a fellow-member. Thus the lines are not always closely drawn. Only a few of the members are known solely as leaders. They are the fortunates who have contracts with theatres and the like, or who make up orchestras designated and advertised under their own name as "director." In the St. Louis union of 600 members, only about 100 are employed steadily by these directors in theatres. The others are employed now by one leader, now by another, on short engagements and for special occasions. Yet those who are predomi-

nantly leaders are clearly set off from the others. They are a small minority, and the policy of the union is determined by the majority, whose interests are those of wage-earners. This will be seen at many points.

Formerly the musicians met at saloons to make their engagements, each clique or grade of the local talent having its favorite "joint," whose proprietor collected his rent in the "drinks." The first step of the union was to rent its own headquarters. The next was to bring in all the local musicians. The two worked together, as will appear. In the matter of headquarters, unlike other unions, the musicians must have a room large enough for their daily gatherings. The New York union provides a floor where a thousand or more of its members can meet every day. The St. Louis local accommodates a hundred or more. To secure such a place with offices adjoining, the larger locals have found it necessary to buy or build a house. To do this, the older ones took out articles of incorporation under State laws, not as unions, but as benefit associations, enabling them to hold property not for profit. But these articles of incorporation prevented them from freely enforcing discipline by fines, expulsion, and boycott. The younger locals, of which St. Louis is the type, avoided incorporation, but shrewdly resorted to the device of the stock exchange. The "New York Stock Exchange Building Company" is composed of the same members as the "New York Stock Exchange." But the former is incorporated, owns the building, and leases it to the latter, which is unincorporated. The Aschenbroedel Club of St. Louis is an incorporated body, and the unincorporated Musicians' Mutual Benefit Association ("Local 2, St. Louis, American Federation of Musicians") has a by-law, adopted in 1894:—

Whereas the main object for the formation of the Aschenbroedel Club was to unite the professional musicians of St. Louis into a social body, with corporate powers, with a view of securing a suitable property for a home; and

Whereas, in spite of all inducements offered, a large number of the professional musicians are still outside of the organisation; and

Whereas, the fact is that every professional musician in the city is reaping the benefit of this organisation (and with the exception of those that are members) without assuming any of its responsibilities; and

Whereas, believing that every professional musician ought by right to be a member of this organization,—therefore be it

Resolved, first, That in future all who are accepted members of the Musicians' Mutual Benefit Association shall also become members of the Aschenbroedel Club.

Second, That a violation of the rules and regulations of the Aschenbroedel Club shall be considered a like violation in the Musicians' Mutual Benefit Association, and punished accordingly by the proper authorities of the Musicians' Mutual Benefit Association.

Third, That the Musicians' Mutual Benefit Association shall in no sense be held responsible for any of the liabilities of the Aschenbroedel Club.¹

The St. Louis Aschenbroedel Club has one set of officers chosen from the older, conservative, and commercial-like men, and holds only an annual meeting. The Benefit Association, or union, has younger and more aggressive officers, and holds fortnightly or special meetings. The Aschenbroedel Club collects no dues or fees, but covers its expenses through a lease of its building and equipment to the union. It operates a bar and buffet, billiard tables, and so on. It never expels or disciplines a member, but, when one loses

¹ The term "Aschenbroedel" is not the equivalent of "Cinderella." After the death of a beloved leader in New York, named Asche, a social club of musicians, desiring to honor his memory, but to avoid the epithet "asche," added the suffix "broedel," signifying the rollicking character of their club. The term has spread to similar clubs throughout the United States. The New York club was the original musicians' club in America, organized in 1860. Unlike the St. Louis Aschenbroedel, its membership is limited to those who speak German, and it includes only about one-fifth of the members of the union. It owns a club-house valued at \$150,000. The local union is separately incorporated. Other nationalities within the union have their own clubs.

his membership in the union on account of an infraction of union discipline, his membership in the incorporated body is worthless.

This dual arrangement has allowed the union to slip through the meshes of the law by means of a frank and unusual plea. A member was expelled by the Benefit Association for violating a sympathetic strike order, forbidding him to ride on the cars of the street railway company during a strike of its employees. He secured a permanent injunction in a lower court restraining the officers from enforcing the order, on the ground that he had a property right in the sick and mortuary benefits of the association, and that the order of expulsion was not passed in the manner provided for amending its by-laws. The higher court reversed this judgment on the plea set up by the union¹ that its by-laws and regulations were contracts in restraint of trade; that it was a monopoly, in that a musician could not find employment without being a member of the association; that the plaintiff was aware of its illegal character when he joined, and had indeed joined for the purpose of profiting by such monopolistic regulations which he had faithfully observed; that the benefit sections of the by-laws were merely aids to enforce the restrictive sections, and could not be separated from them; and that for the court to sustain the injunction would be specifically to enforce a contract with a monopoly or association in restraint of trade. To support this plea, the union submitted its constitution and by-laws showing its scale of minimum prices, its prohibitions, and other compulsory conditions affecting membership, and the application for membership signed by the plaintiff. The court, in rendering its decision, said:—

¹ St. Louis Court of Appeals, 1901, *Froelich v. Musicians' Mutual Benefit Association et al.* Brief of appellant, Frank R. Ryan, attorney.

In the case at bar the by-laws impose on the members of the association a most slavish observance of the most stringent rules and regulations in restraint of trade. So strict and far-reaching are they that no musician in the city of St. Louis; and for that matter in any city of the country, can find employment as a musician unless he is a member of the association. Such a confederation and combination is a trust, pure and simple. . . . The plaintiff is in the attitude of asking the court to keep him where he says he has no right to be and to retain him in a position where he may aid in the support and maintenance of an illegal association, and where he may continue to support and keep up a monopoly of the services of musicians. Courts have never dealt with monopolies except to restrain or destroy them, and we decline to depart from this wholesome rule in this case and reverse the judgment with directions to the trial court to dissolve the injunction and to dismiss the plaintiff's bill. Decision unanimous. 93 Mo. App. 383.

The legal mind is perhaps profound where it seems comical. At any rate, the St. Louis local thus demonstrated that to enforce discipline it should avoid incorporation. The secretary has impressed the lesson on other locals, and has advised all that hold State charters to give them up or to use them for conducting the social and business functions of the organization, leaving the enforcement of prices and regulations to unincorporated associations which cannot be "haled into court every time they attempt to enforce the discipline of the American Federation of Musicians."¹

Turn now to the New York local. Its members, operating under a State charter granted by special act in 1864, soon learned its limitations. They went again to the legislature, and secured in 1878 an amendment so extraordinary as scarcely to be explained on modern lines of legislation.² This amendment added to the other objects

¹ *International Musician*, June, 1904.

² Laws of 1878: "An act to amend chapter 168 of the laws of 1864 entitled 'An act to incorporate the Musical Mutual Protective Union,' passed April 11, 1864."

of the union "the establishment of a uniform rate of prices to be charged by members of said society, and the enforcement of good faith and fair dealing between its members." The amendment continues:—

It shall be lawful for said society, from time to time, to fix and prescribe uniform rates of prices to be charged by members of said society for their professional services, and for that purpose from time to time to make and adopt such By-laws as it may approve. And any member of said society violating any such By-law may be expelled from said society (after being afforded an opportunity to be heard in his defence) in such manner as such society may, from time to time, prescribe by By-laws which it is hereby authorized to make.

By this remarkable act of legislation the New York musicians, twenty-five years before they joined the trade unions, sought legally to practise trade-union tactics. Yet, while the act grants certain powers assumed by trade unions, it fails, of course, to grant the most effective weapons of unions, the power to strike or boycott and the power to fine or expel a member for working with a non-member or working for an "unfair" employer. Nevertheless, the union adopts and enforces this class of by-laws, as well as by-laws enforcing the minimum prices. But the fact of incorporation gives to a fined or expelled member a standing in court, and this is seen in the cautious use of its discipline by the musicians' union. An act of incorporation is strictly construed by the courts. All powers not expressly granted by the legislature are withheld. But an unincorporated union enjoys all powers not expressly prohibited by the courts. In States other than New York this principle would work against the incorporated union. But in New York, where the courts have permitted large powers to unincorporated unions, they have allowed the same powers to the incorporated musicians' union.¹

¹ *Thomas v. Musicians' Mutual Protective Union*, 121 New York, 46 (1890).

Consequently, the union has not seen fit to abandon its charter, but rather has recently gone to the farthest extreme of any American union in exposing itself to attack by investing its funds in a building for headquarters costing \$300,000.

The St. Louis local worked out another legal device bearing on the "closed orchestra." This is the form of contract between managers, leaders, and members. Formerly the leaders were in the position of independent employers without capital, who contracted with managers to furnish musicians. Now the leader is made the agent of the musicians whom he employs. He first enters into a contract with the manager to furnish musicians as their agent, either for the season or for a special occasion. The form covering a special occasion has a clause:—

It is further agreed that if there are any bands or orchestras employed for this engagement who are unfair to the American Federation of Musicians, this contract shall be considered null and void, as far as the party of the first part (the leader) is concerned, but does not relieve party of the second part.

The leader then makes contracts with individual musicians "subject to the rules and regulations of the Musicians' Mutual Benefit Association, Local No. 2, American Federation of Musicians, as prescribed in the Constitution, By-laws, and Price-list." These contracts are signed in duplicate, and a copy is filed with the recording secretary, on the pain of penalties of \$25 to \$100 for failure. By making the leader the agent of the manager instead of the principal, the manager is made responsible for the wages of the musicians, while, as agent of the musicians, the leader who fails to pay them can be prosecuted for embezzlement instead of sued for a debt, and at the same time their wages while in his hands are exempt from attachment for

his debts. These contracts probably would be thrown out of court on the same ground that the foregoing injunction was dissolved, although they have never been tested. The union has a more expeditious remedy. It fines or expels the leader for violating the rules, and the St. Louis local has collected in this way at least one fine as high as \$1,000.

Evidently, it is through control of the leaders that the union is trying to control the trade. Partly on this account the union has failed as yet to introduce well-recognized agencies of other crafts composed solely of wage-earners. None of the locals has a "business agent" or "walking delegate." Such an officer has not been needed for purposes of organization, since the trade has been fully organized in other ways. He would be needed only as a detective to prevent leaders and members from violating the rules, and especially from paying and accepting less than the minimum scale of prices. The usual method of cutting prices is for the members to pay back secretly to the leader a rebate on the published tariff. There are other forms of rebate easily prevented, such as accepting tickets as part payment, giving presents, allowing one's self to be fined, or paying extortionate prices for articles. But these secret rebates are not discovered unless the parties have a "falling out" and one of them "turns union evidence." It was through such an exposure that the leader of the Metropolitan Opera in New York was fined \$200. In lieu of a business agent the unions have given much attention to perfecting their control of the leaders. These are required to be members of the union, and members are prohibited from playing for non-union leaders. This, of course, subjects the leader to discipline, but it injects a diversity of interests into the organization. The result is several more or less futile rules. The leader in St. Louis is expelled if he offers a member less than the

schedule of rates or if he threatens to blacklist a member either for accepting other engagements or for reporting infractions of the rules. Again, the leaders, although a small minority, are likely to have undue influence through their power as employers. To reduce their power, nearly all of the unions prohibit a leader from taking a contract for a season engagement where he cannot personally be present. The value of this rule is seen by contrast in the case of Baltimore, where one leader has secured the contracts for all of the theatres. He thereby controls the best opportunities for employment of his fellow-members, and this enables him to control the meetings and to dictate the policy of the union. Consequently the scale of wages is lower and the conditions of employment inferior to those in other places, and Baltimore musicians are considered a menace in competition with Washington and Philadelphia musicians. In Brooklyn, too, a single leader controls all of the theatres, but this has not led to abuse, because the Brooklyn musicians are a small minority of the metropolitan union. The rule of several other unions, by preventing such a monopoly, preserves to the rank and file a stronger control. The Chicago local expelled a leader for taking the contracts for three theatre orchestras.

A local leader is not permitted to import or "colonize" musicians, even if they are members of other locals, without the consent of his local. The case is different with "traveling leaders." There are three well-known grades of traveling theatrical companies. New York is the centre where these are made up, though a few go out from Chicago. One grade is the opera, or minstrel show, with its own complete orchestra and leader, or the symphony company. Such a company is independent of local musicians, and, like the Boston Symphony Orchestra, is able to continue non-union. The next grade is the "skeleton" orchestra, composed of three or four musicians and the leader. These

must be members in good standing, else they cannot secure local musicians in the places visited, to fill out their orchestra. Last is the theatrical company that carries only its leader, who must be a pianist, in case he cannot make up a local orchestra, and must be a member if he expects to employ local players. If the skeleton orchestra or single leaders remain in a place less than four weeks, they do not take out transfer cards from the local of their origin. If they stay longer, they must transfer their membership. Some of these leaders are not members of a local, and, in order to bring them in, the Federation at a recent convention provided a card of conditional membership issued by the national organization. When such a leader "locates," his card is converted into a local membership. If a leader holding such a card plays in a non-union house, his card is forfeited, and this prevents him from getting an orchestra in a union house. By means of these rules the Federation has effectually "unionized" the theatres and orchestras throughout the United States and Canada. There remain but fifty leaders, theatres, and orchestras on the "unfair list," the Boston Symphony Orchestra being the only important one.

It will be seen that the musicians' union is not only a "closed shop" union: it is also a closed employers' association. The contractor, or leader, must be a member of the union. Consequently, unlike other crafts in the modern labor movement, the musicians retain the character of a guild with its masters and journeymen. This diversity of interest has led to considerable discussion and to the proposal that, imitating other unions, the leaders should be excluded, and that a member who takes a contract should be given an honorary discharge. The nearest that this proposal has come to be acted upon is at Cedar Rapids, where the local classifies the leaders and requires them to take out a leader's license, for which they pay \$25. This

arrangement is an innovation. In other places the leaders are on the same basis as other members, and any member can become a leader simply by getting a contract. The musicians point out that their leaders are on much more intimate terms with the rank and file than are the contractors in other trades. Their interests are the same. They require no capital beyond that of the others; they perform in company with their fellows; and they are continually reverting to ordinary membership. On the other hand, the ease with which a member becomes a leader causes a severe competition for leadership. In New York fifty musicians may be "pulling the wires" to get a theatrical leader's position away from him. Nearly all the grievances and discipline with which the union is occupied spring from this cut-throat competition. If the leaders were separated, if they formed their own contractors' association with their own rules and discipline, and if then they worked under a trade agreement with the union, the two together could rule out the unscrupulous leader, and the conditions would be bettered for both leaders and men. These views, however, are as yet held by but a few. To the historical student it is interesting to see in this belated organization the same forces at work which long since separated the guilds of other crafts into the trade union and the employers' association.¹

The American Federation of Musicians, as its name indicates, is a federation of local unions rather than a fully developed national union. While the national organization is supreme, yet the spirit of local autonomy is so strong that the delegates have withheld important powers conceded to other national trade unions. The Federation is prohibited from adopting a general benefit or insurance assessment. The revenues of the national are only two

¹ A similar development, completed in the year 1902, is described in the article "The Teamsters of Chicago," in this *Journal*, May, 1906.

cents a month from each member,—a sum less than one-half the revenue of the 'longshoremen, and only one-twentieth of that of the moulders and one-sixtieth of the cigar-markers. The locals regulate their initiation fees, and a local with high fees assesses the difference on a member admitted by transfer from a local with low fees. That the power of the national organization is growing is seen in the recent rule that this assessment shall not exceed \$25. This was directed against the New York local whose fees are \$100, making the difference assessed to members coming from other locals as high as \$75 to \$95. This question of "universal membership" has agitated the conventions more than any other, and has led to the partial breaking down of local barriers already described. Remnants of the barriers are seen in the rule against "colonizing," by which a local prevents a local leader from bringing in members of other locals for permanent engagements and even for single engagements. Evidently, until universal membership is fully established, the closed shop remains a local monopoly.

Naturally, the local unions of musicians are jealous in admitting members, and the national organization has been compelled to legislate upon this subject. Each local is required to have an examination board to pass upon the eligibility of applicants, but any local rule prohibiting the admission of any competent musician is declared null and void,¹ and the applicant has an appeal to the national executive board. All new locals must hold their charters open for at least one month, and must invite all musicians within their jurisdiction, through the press or otherwise, to become members.² Only expelled or suspended members of the Federation are excluded, and these may be readmitted on appeal or by payment of a fine. Members are strictly forbidden to play with non-members, except in the cases already noted.³

¹ Constitution, Article V., Section 20. ² *Ibid.*, Section 1. ³ *Ibid.*, Section 16.

These rules maintaining the closed shop have their significance in view of the wide recruiting area for the supply of musicians. The union necessarily can prescribe no term of apprenticeship. A musician's training begins in childhood, and requires many years of application. Teachers of music are found in every considerable locality, and those who are members of the union are as free as others to organize classes and solicit pupils. In fact, this is a source of income to many of them. Of the thousands who take up instrumental music there are relatively few who come to look upon it as their vocation from which to earn their living. These must be admitted to the union, else their competition on the outside will menace the scale of prices. But there are others to whom music is only an avocation, at which they can pick up a few dollars outside their regular vocation. These, like the women who work at home for "pin money," are the more serious menace to those who depend on their skill for all their money. To bring them into the organization and to bind them to a minimum scale of prices is a decided protection to the professional element. Of the 45,000 members throughout the country, over one-half are working also at other occupations. One consequence of the musicians' affiliation with the trade unions is their rule requiring such members to join also the local union of their regular craft wherever such exists.¹ Thus the musicians offer the peculiar spectacle of a union largely composed of members of other unions and confronted by the problem of maintaining two minimum scales of wages. However, this applies mainly to smaller towns. In such a town, perhaps, only the leader may follow music for his livelihood, while all the other members follow other occupations as well. In such a town the initiation fee is usually \$5,—the minimum prescribed by the national organization. In larger towns the highest is \$25, excepting

¹ Standing Resolution 14.

New York, which in the past five years has placed it at \$100. These larger fees tend to exclude the incidental musician and to reserve the field for the strictly professional.

This competition of semi-musicians has led those who look upon themselves as artists to advocate, in times past, State regulation of the profession instead of trade-union regulation of the craft. They point out that State governments restrict the practice of some professions to those who have passed a prescribed examination, and that this restriction covers not only lawyers, physicians, dentists, pharmacists, and teachers, but also veterinarians, architects, horse-shoers, bakers, and so on. In line with these precedents a bill was introduced in the Illinois legislature creating a "Commission of Music," to be composed of five members selected by the governor from ten persons nominated by the Illinois Music Teachers' Association, with power to grant licenses on examination to teachers of music. Its advocate contended that the low state of their art was due to the many self-styled artists, and that, like other professions, theirs would be improved and elevated by legal selection of the fit and exclusion of the unfit. In lieu of the enactment of such a law the musicians' union tries to reach a similar result through its "closed shop," its examination boards, and its minimum wage. The restrictions which the professional musician advocates for the sake of his art the trade-union musician enacts for the sake of his living. The latter frankly bases his policy on the commercialism which has gained control of the country, and which, on the one hand, sends its greatest of artists "out for the almighty dollar," and, on the other hand, "cheapens the wages of the ordinary musician by the same tactics that employers pursue with other hired help."

This effort to protect the minimum wage is seen in several

of their regulations. One is the exclusion of "juvenile bands." A leader or teacher organizes his pupils and advertises them under a taking or deceptive name. Their parents provide uniforms and instruments, besides paying the teacher a small sum for tuition. After a few months the leader takes contracts, and his pupils play in public for "the experience." This form of child labor is prevented by the exclusion of "incompetent" musicians and of persons under sixteen years of age from membership in the union.

Another rule prohibits co-operative or "share plan" engagements, unless the same are "proven absolutely non-competitive." A co-operative band plays on a speculation for a manager, the pay of the members being a share of the receipts. If such a band comes in competition with a leader who pays the union scale, he may find it difficult to secure the contract. Non-competitive engagements, where such bands may play, are those for practice, or for educational purposes, or for raising funds to buy a uniform, or for creating a class of engagements not in vogue heretofore.¹ In these the band assumes all responsibility, is not engaged, and so does not compete with other bands.

The opposition of the musicians to army and marine bands has come vividly before the public more than any other policy of the organization. Enlisted musicians of the army and navy are not admitted to membership, and a member enlisting severs thereby his membership. No member is permitted to play a paid engagement with any enlisted man. On noted occasions at Baltimore, Chicago, and San Francisco union bands have withdrawn from pageants in which government bands took part. Repeated complaints against their competition have been made to the authorities at Washington, and in this even the National League of "artists" led the way twenty years

¹ Decisions of the President, *International Musician*, February, 1903, p. 2.

ago. The enlisted men are equipped by the government, and are paid a salary somewhat less than the union scale. They are allowed to supplement their salaries by private engagements. In most cases their orders forbid accepting less than prevailing civilian rates, but the National League in 1888 compiled one hundred cases of violation of these orders. The situation illustrates the economist's "marginal man." In St. Louis in 1886 there were five civilian bands and one Cavalry Depot band stationed at Fort Jefferson Barracks. The five bands were at all times compelled to adjust their prices to what managers said they could get the army band for. The one band was a club used in turn on each of the others. Finally, the others adopted a joint defence,—a boycott. This was effective only where the manager needed more than one band or needed one band continuously. Last of all, the Federation appealed from the military and naval authorities to Congress, and now asks for legislation to raise the pay of all members of enlisted bands, "with the unconditional proviso that they shall be prohibited from playing any paid engagements while in the service of the government."

It is significant that the union's antagonism does not apply to navy yard bands. These are composed of local musicians who do not take contracts as a band, but go out as individuals. The antagonism applies only to enlisted musicians, and these, by their oath of service, are under control of the government rather than the union. They cannot be ordered on strike or boycott if their superior officer orders differently. They cannot be summoned to union meetings or examined and punished for cutting under the union prices. They menace the minimum wage because they menace the union discipline.

Immigration, too, is a menace that has troubled the musicians. Though themselves largely foreign-born, especially German, yet they have taken a stand against free

immigration. Even the officers of the National League, in spite of their artists' pride, seriously contended before the immigration authorities that under the alien contract labor law musicians should be excluded, on the ground that they were laborers rather than artists, whom the law admits. The Federation, in line with its trade unionism, consistently urges Congress to class musicians as laborers, thereby bringing them under the alien contract labor law.¹ It declaims against "the wholesale importation of musicians" as "endangering the existence of musicians in this country, and depreciating their opportunities to earn a respectable livelihood as American citizens."² It decries the influx of foreign bands, adopting "some high-sounding royal or other foreign title," "picked up in the streets of large cities," managed by some shrewd American, "who lines his pockets by adopting the degrading padrone system of Europe, under which no self-respecting American citizen can exist," and proceeds to declare such aggregations "unfair" and to boycott managers who hire them. It welcomes "legitimate" foreign bands and orchestras making concert tours under fair conditions, "but will resist to the last these fraudulent aggregations."³ The Federation sent a circular in their own languages to the musicians of Europe warning them against speculators for the World's Fair at St. Louis, and advising them that they would find the cost of living five times as great as in their own countries.⁴ Finally, the constitution of the Federation requires all members to be citizens or to have "declared their intention," and to complete their naturalization "with due diligence."⁵ Thus the closed shop and the boycott are the musicians' regulation of immigration.

¹ Standing Resolution 10.² *Ibid.*, 1.³ *Ibid.*, 15.⁴ *International Musician*, June, 1902, p. 9.⁵ Constitution, Article V., Section 8.

Wages and Hours.

There is hardly a craft whose earnings are more uncertain than those of the musician. The steadiest job is that in theatres for eight months and summer gardens for four months. In the St. Louis local of 600 members, only about 100 have these positions. There the union scale for theatres provides \$21.25 per week, for not more than nine performances, up to \$24.15, for not more than fourteen performances, to which is added one rehearsal a week. At these prices a musician playing every night in the year, with two matinées and a rehearsal each week, could earn \$1,100. But such a feat is impossible. These men actually earn about \$700 in eight months and \$300 in the summer months, making \$1,000 for the majority of theatrical positions. These, of course, are minimum rates of pay, as are all of the other scales; and there are certain ones, such as first violin, first cornet, and so on, who receive more than the minimum. There are also "extras," so that a few may earn as much as \$1,200. When the St. Louis union was organized twenty years ago, there were three theatres paying the above rates. These were not changed, but the others were raised to the same level, bringing them up about 15 per cent. The best men have always received the higher rates of pay. Their gain has come from regulating the hours, limiting the number of rehearsals, getting paid for extra rehearsals and extra performances, and prompt payment of salaries in full.

The other five hundred musicians in St. Louis must depend for their earnings upon all sorts of fleeting engagements. It is here that the union has mainly affected the rates of pay and the hours of work. The "price-list" covers them all with particularity, and is amended whenever a gap appears. Formerly at private parties, weddings, balls, entertainments, and the like, the pay was \$2

to \$4 for the night. The concessionaire might keep the musicians till daylight, though but a few dancers held out. Now the player gets \$4 till 2 A.M., and \$1 an hour thereafter. Hence the dancers do not remain after 3 or 4 A.M. Parades were \$3 for four hours. Now they are \$4 for the first hour on Sundays, and \$3 on week-days, with \$1 for each additional hour. All day to 7 P.M., or afternoon and evening to 11.30 o'clock, is \$10. Funerals were \$1.50. Now they are \$3 or \$4 "if to a cemetery," or \$5 "with marching after leaving the cemetery." And so on for baseball, Fourth of July, corner-stone laying, flag-raising, dedications, saloon concerts, and the hundred other occasions where the musician softens sorrow, fires patriotism, or drowns bedlam.

Several kinds of calls formerly were not paid for at all, but now they have a scale of prices. Members are prohibited from donating their services unless the union as a whole votes to volunteer, as for some great public service, like the relief of the Johnstown sufferers. Thus church music was often furnished free as an advertisement for other work. Now a single service is \$5, and three services the same day \$10. Decoration Day and memorial services were free on account of sentiment. They are \$4, with marching extra at \$1 an hour. Serenades were free, and a leader could control the time of his men by calling them together when they had "a night off" to serenade a hoped-for patron. Now serenades are \$3 the first hour, with extras for marching and overtime.

The cost of their uniforms is also a matter of wages. Each bandmaster or leader wishes his own uniform, sometimes fantastic and costly. This the musician is often compelled to buy, and so to own, say, four or five different uniforms. The St. Louis local led the way in establishing a regulation uniform, which members are required to wear. It costs about \$18.50, can be made by one's own tailor,

hence is always a fit, avoids contagion, provides a new suit for clear days and indoors and an old one for wet days and parades, and, not least important, enables the public to distinguish between union and non-union bands. A leader may furnish, if he likes, a distinctive suit, or he may furnish only a one-inch band with his own lettering to be placed on the cap. When the Chicago local, in 1905, adopted the regulation uniform, they were checked by an injunction obtained by certain leaders. This, later, was withdrawn, and the union uniform is in line of general adoption.

Curiously, the musician's demands have not lessened his calls. Guests at cafés, restaurants, and hotels were regaled by dirty gypsies or mandolin negroes or other itinerants. Now fifty musicians in St. Louis are regularly employed at \$5 for a single day of seven hours, or \$21 a week of seven days, or a score of other price and time combinations. Trolley parties have appeared. Phonograph musicians in New York dispense harmony to the ends of the earth at \$1.25 an hour. The taste of the community has improved, its wealth and accessibility have grown, and the musician gets more pay and more work.

The foregoing prices and changed conditions pertain mainly to the St. Louis local. In New York the price-list is somewhat higher, and has not been changed for forty years. The difficulty there has been in enforcing the scale. About 300 of the best men earn from \$1,500 to \$2,000 a year, getting steady employment at the minimum scale, while about one in fifty of all the members gets more than the minimum. But the majority earn less than \$1,000, and in some lines, like balls, the competition and evasion have been so great that the scale became a dead letter and had to be reduced.

Although the demand for musicians has increased, yet there is a rule of the national union which carries the sug-

gestion that the doctrine of "making work" has a place in the craft. This law permits a local to specify the minimum number of men allowed to play in a theatre orchestra. The St. Louis local has made but one use of the law, namely, to require the manager of a certain large hall to increase the number of musicians in his orchestra, on the ground that the audience could not hear them. The New York local places the minimum number of men to be employed in a theatre at six, but this absurdly low figure gives evidence rather of the musician's longing to produce artistic music than of his policy to make work. This is shown by the refusal of Henry Irving, on his first appearance in New York, to go on with the regular house orchestra of twelve men, when he had been accustomed in England to forty. He compromised on thirty-five. The union minimum of six is but a feeble effort to counteract the managers' view that the American musician, like the American mechanic, should turn out more work than his European competitors. For Henry Irving's stand in this matter the union made him an honorary member.

Doubtless the idea of making work appeals to some of the locals and some of the members. The New York local fines a member for playing more than one instrument at a time at a single engagement, "this being against the interest of our fellow-members." For the same reason it denounces by resolution the "exactions of unscrupulous leaders who require bass drummers to play cymbals with drum while marching, and snare drummers to play bass drums with pedal attachments on single-night engagements." The musician, like the machinist, clings to the "one-man-one-machine" tradition of his craft. His arguments are right in æsthetics, and may be right in economics, for he reasons that, if the ear of the American public were cultivated to good music, it would demand more music.

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THE COLLATERAL TRUST MORTGAGE IN RAIL- WAY FINANCE.

ONE of the most important inventions of modern railway finance is the collateral trust mortgage. Devised as a means of evading a statutory limitation to a railroad company's activities, it has become a powerful and, indeed, indispensable instrument for building up great railway systems. During the last twenty-six years there have been about ninety issues of collateral trust bonds, ranging in amount from \$700,000 to \$75,000,000 each, put forth for a variety of purposes, and covering from sixty miles to four thousand miles in a single issue, while a large number of mortgages bearing other names have collateral trust features.

The ordinary railroad mortgage is a direct lien upon the road-bed, track, right-of-way, franchises, real estate, and other tangible property of the corporation. A collateral trust mortgage is a mortgage not upon tangible property or franchises, but upon other mortgage bonds which are direct liens upon property, or upon corporate shares which represent ownership in such property and franchises. Thus the collateral trust bonds issued by the Chicago, Rock Island & Pacific Railroad Company in 1903 are secured by a mortgage upon nearly \$28,000,000 of the common stock of the St. Louis & San Francisco Railroad Company, this stock being held in trust in the interests of the bondholders by a certain trust company. The collateral trust bonds issued by the Illinois Central Railroad Company in 1892 are secured by a mortgage upon the first and second mortgage and income bonds of the Louisville, New Orleans & Texas Railroad Company, similarly held in trust.

An account of the origin of the collateral trust mortgage is of interest because it furnishes an illustration of corporate ingenuity in the matter of doing illegal things in a legal way. The construction of the Union Pacific Railroad, among others, was subsidized by the United States Government, which took a second lien upon all that company's property to secure its loan. In 1873, in order to prevent the impairment of the government's lien, Congress passed a law prohibiting the Union Pacific from increasing the bonded debt of the property subject to this lien. Now railroads are built largely out of the proceeds of bond sales. The result of this law was that the Union Pacific could build no branch lines or extensions under its charter. If built at all, these branches must be built under separate charters and legally distinct companies. But these companies must be controlled by the Union Pacific, or they might fall into the hands of its competitors. Further, the bonds of small subsidiary companies could not be sold directly to the public unless their interest and principal were guaranteed by the parent company, and this the latter could not legally do because that would be placing at least a contingent fixed charge upon its own earnings.

This situation resulted in the Union Pacific 6 per cent. collateral trust bonds of 1879. Legally distinct companies were organized and chartered to build the desired branches. The Union Pacific advanced the funds with which to construct these lines out of its current earnings, and received in compensation the capital stock and first mortgage 7 per cent. bonds of the smaller companies, which thus became subsidiary. To reimburse its treasury for these advances, the Union Pacific mortgaged these first mortgage bonds, and issued and sold about \$7,000,000 of collateral trust bonds against them. The interest on this collateral was more than sufficient to pay the interest on the 6 per cent. bonds, so that, as long as the subsidiary companies

did not default in their interest payments, the charges against the revenues of the parent company were not increased, while at the same time it was getting the benefit of a profitable interchange of traffic with those companies. Thus did the Union Pacific accomplish the feat of constructing, eventually without cost to itself, branch lines which were directly under its control, and at the same time of living up to the letter of the national statute.

Three years later, when the Union Pacific created a second collateral trust issue for a similar purpose, suit was brought by a stockholder to prevent the issuance of the bonds, upon the ground that this really increased the funded burden of the Union Pacific property, and, therefore, was in violation of the national statute. It was shown, however, that the plaintiff, although a stockholder at a time previous to the date of this bond issue, had sold his stock and had not again become a shareholder until after the new bond issue had been authorized. The court decided that he had no right of action, so that the real point of the case was never judicially considered.

The idea of the collateral trust mortgage was probably suggested by the practice, long current among stock brokers, business men generally, and railway companies as well, of borrowing upon corporate securities as collateral. Such debts, in the form of ordinary promissory notes, ran for short periods of thirty or sixty days only. The question is naturally suggested, If such collateral is adequate security for ordinary commercial paper, why would it not also be adequate security for long-time loans?

The collateral trust mortgage soon became popular and was used for a variety of purposes. The most important of these have been to fund floating debts, acquire control of connecting railroad lines, and to finance new construction. Out of seventy collateral trust issues about which

inquiry has been made for the present investigation, eleven have been made for the first of these purposes,—funding troublesome floating debts. Some of these have been due to the misfortunes of the railroad company, some to new construction for which funded obligations had not yet been created, some to both. Thus poor crops in Kansas and Nebraska in 1886 and 1887, strikes and general labor agitation, caused the Atchison, Topeka & Santa Fé to incur a floating debt of \$5,000,000 in 1888. A strike, a flood, assisted by a general business depression, caused the Baltimore & Ohio Southwestern a floating debt of over \$1,000,000 in 1897. The Richmond & West Point Terminal Railway and Warehouse Company repeatedly piled up floating debts because of the general unprogressiveness and lack of efficiency in the management of the railways which it controlled. Illustrations of floating debts due to construction were those of the Central Railroad and Banking Company of Georgia in 1887, and of the Missouri Pacific prior to 1895. The former piled up a 6 per cent. floating debt of \$1,050,000 in building roads in South Carolina, and funded this into a 5 per cent. collateral trust mortgage. The Missouri Pacific had been building railroads with materials bought on account or on commercial paper. All of the floating debt thus created had been bought up by Jay Gould, Russell Sage, and other directors, and held by them subject to call. This debt resulted in the Gold Funding Notes of 1895.

The manner in which this method of funding floating debts becomes available may be illustrated by the case of the Richmond & West Point Terminal Company in 1883. That company had acquired control of a network of railways in Virginia, Tennessee, Georgia, and the Carolinas, by purchasing their capital stock and bonds. Almost invariably these had been obtained in exchange for

its own capital stock, so that these securities of subsidiary companies lay in the Terminal Company's treasury, unencumbered by any mortgage. When the company found itself burdened with a large floating debt in 1883, it relieved itself by pledging a great mass of these shares and bonds as security for its 6 per cent. two-year collateral trust notes.

The old Wabash, St. Louis & Pacific funded a similar floating debt in 1883. That company had been seized with the mania for expansion. Organized in 1879, it had in three years' time increased its mileage from 1,578 to 3,518 miles, its debt from thirty-five to seventy millions, and had accomplished this partly by construction under subsidiary companies, mostly by annexing all the odds and ends of railway lines lying loose in its vicinity. In the same process it had collected a large and miscellaneous mass of railway securities in its treasury. Aided by destructive washouts, poor crops, and the poor condition of the roads acquired, it had piled up a floating debt of over \$5,000,000. About \$18,000,000 worth of these stocks and bonds were bundled together under a collateral trust mortgage and \$10,000,000 of 6 per cent. notes issued against them, part of which was to provide for this floating debt and part to pay off certain car trust certificates which were to mature during the ensuing nine years.

These bonds of the Wabash were to run thirty years. Usually, however, the securities issued to take up a floating debt have a period of only three or four years, and are called collateral trust notes. The Richmond & West Point Terminal notes of 1883 matured in 1885, and were converted into another collateral trust issue bearing 7 per cent., and maturing in 1887; the Atchison notes of 1888 were to run only three years; the Union Pacific Collateral Trust Notes of 1891, three years; those of the Northern Pacific of 1893, five years.

The reason for the temporary nature of these issues is apparent. They are created when the railway company is in financial distress, when its credit is poorest. Consequently, these notes must either bear high interest rates or sell at a large discount, or both. The first collateral trust loan of the Richmond & West Point Terminal in 1883 bore 6 per cent., and was negotiated at 90, representing a cost of 11 per cent. per annum. Its successor in 1885 bore 7 per cent. The Atchison notes of 1888 bore 6 per cent., and netted the company 97½. The Union Pacific notes of 1891 bore 6 per cent., and were taken at 92½, representing a cost of 8 per cent. per annum. The railway company feels that by tiding over the temporarily unfavorable condition of its finances it can place its long-time securities at lower interest rates. Hence these short-time notes.

So much for the floating debt as leading to this form of security. A more important purpose of the collateral trust mortgage is to serve as a means of acquiring control of connecting lines. There are three ways in which this may be accomplished, namely: (1) one railroad company may purchase a controlling interest in the securities of a second company, paying for them in cash, and reimburse itself by mortgaging the securities thus purchased and selling collateral trust bonds against them; (2) the purchasing company may exchange its collateral trust bonds directly for the desired securities of the second company, and deposit these securities obtained in the exchange under the collateral trust mortgage; (3) the trustee of the mortgage may sell the collateral trust bonds on the market, and with the proceeds purchase the desired securities of the connecting lines, and deposit them under the mortgage.

The first method, the cash purchase, will usually be followed when there is reason for a quick purchase of the

desired securities. Thus, during the panic of 1893, the preferred and common stock, the second mortgage and equipment trust bonds of the Chesapeake, Ohio & Southwestern took a sudden and large drop. The Illinois Central snatched them up at their low prices, at the same time buying that company's floating debt and overdue interest coupons, and thus obtaining control. This move gave the Illinois Central an outlet from Memphis toward the North-west for the traffic coming up over its Yazoo & Mississippi Valley Division, and also connected that division of its system with the main line at Fulton, Kentucky. The Illinois Central reimbursed itself for these cash appropriations by selling an issue of collateral trust bonds secured by a mortgage upon the Chesapeake, Ohio & Southwestern securities.

Again, in 1892, the Illinois Central purchased \$35,236,000 of the mortgage and income bonds of the Louisville, New Orleans & Texas Railroad, which paralleled its Yazoo & Mississippi Valley Division. By the terms of the agreement it was required to pay \$5,000,000 of the purchase price in cash. To pay the remainder of the purchase price of \$25,000,000 and to reimburse itself for this cash payment, the Illinois Central mortgaged the securities purchased, and issued \$25,000,000 of collateral trust bonds against them.

In other cases the companies owning the desired connecting lines may have only a small amount of securities outstanding, so that these may be purchased for cash without inconveniently draining the purchasing company's treasury. The Reading Company in 1899 purchased most of the \$1,500,000 capital stock of the Wilmington & Northern at from \$40 to \$50 per share (\$50 par value), and reimbursed itself in the following year by an issue of \$1,300,000 of 4 per cent. collateral trust bonds.

A more common practice in acquiring control of con-

necting lines is to exchange the collateral trust bonds directly for the stocks and bonds which are desired, and which become the security of the collateral trust bonds. This exchange is made at a fixed ratio stated in terms of the par value of the two sets of securities, usually offering the holders of the desired securities a little more than the market price of their holdings at the time. Thus, in 1902, the Chicago, Rock Island & Pacific Railroad Company, wishing to acquire the capital stock of the Chicago, Rock Island & Pacific Railway Company, offered the holders of that stock its collateral trust 4 per cent. bonds, together with the common and preferred stock of the Rock Island Company of New Jersey, in the ratio of \$100 in bonds, \$70 in preferred stock, and \$100 in common stock for each \$100 of capital stock of the Railway Company. The Railway Company's stock, which had been paying 5 per cent. dividends, had risen in market price from 135 in July, 1901, to 170 in June, 1902, and thence to 200 later in the year. The securities for which these stocks were exchanged guaranteed their holders 4 per cent. on the par value of their investment in the form of interest on the collateral trust bonds, an additional 2.8 per cent. if earned as dividends on the preferred stock, in all a possibility of 6.8 per cent., and gave them a bonus of common stock. Rock Island Company's preferred stock commenced paying 4 per cent. dividends in 1903; but its ability to continue this is contingent upon the old Railway Company's ability to continue paying more than 7 per cent. dividends on its stock, which, in view of the present inferior condition of its property, is improbable.¹

Again, in 1902, to acquire the stock of the Choctaw, Oklahoma & Gulf Railroad, the Chicago, Rock Island & Pacific Railway Company offered the holders of that stock

¹ Since the above was written, the Rock Island Company has been compelled to reduce the dividend on its preferred stock.

its 4 per cent. collateral trust bonds at the rate of \$80 in bonds for each 50-dollar share of Choctaw common, and \$60 in bonds for each 50-dollar share of Choctaw preferred. The preferred stock had been paying 5 per cent. dividends since 1898, and the common from 2 to 4 per cent. This was not in itself an attractive offer to the preferred shareholders; but they had either to accept this offer or furnish large amounts of funds for betterments and extensions, besides withstanding the competition of a parallel line which the Rock Island threatened to build if they refused this offer. They accepted.

The third method of purchasing the securities of another railway company is illustrated in the Richmond & West Point Terminal mortgage of 1887. The "Terminal Company," which had hitherto been subsidiary to the Richmond & Danville, wished to acquire the \$6,000,000 of First Preferred Stock of the East Tennessee, Virginia & Georgia and a controlling interest in the Richmond & Danville stock, and thus to become the parent company. For this purpose \$4,400,000 in cash was required, in addition to 40,000 shares of the "Terminal" Company's stock. To obtain this cash and fund a floating debt, a mortgage for \$8,500,000 was placed upon a list of stock and bonds, including the "East Tennessee" and the Richmond & Danville stock about to be purchased, the list amounting to \$21,416,000. The collateral trust bonds thus secured were delivered to a syndicate in exchange for the necessary cash funds, the syndicate reimbursing itself from the sale of the bonds. In other cases the trustees of the mortgage sell the bonds, and from the cash proceeds purchase the desired railway securities, and hold them subject to the mortgage.

So much for the methods of purchasing the securities of connecting railroads. Twenty-nine out of about seventy collateral trust issues were created wholly or in part for

this purpose. Other methods of acquiring control of connecting lines are through the lease of their roads, consolidation, and common personal ownership of the stock of the two companies. The lease is the most common. But, if a fixed rental is paid for the leased line, this becomes burdensome to the lessee if the acquired line should prove unprofitable or during times of depression. If the rental be a fixed percentage of the gross or net earnings, thus fluctuating with the prosperity of the leased line, this in practice has been found to discourage improvements by the lessee upon the leased property, because the lessee will not get the whole benefit of such improvements. As a result, many companies are supplementing their leases by purchasing the stock of the leased lines, or are purchasing this stock and cancelling or refusing to renew their leases. The Illinois Central adopted the latter course in dealing with its Iowa lines in 1887. The Mobile & Ohio, in 1900, supplemented its lease of the St. Louis & Cairo Railroad by purchasing that company's stock under a collateral trust mortgage. Very frequently a railway company, after obtaining a controlling interest in the stock of a connecting line, will also lease its road. This enables the parent company to operate the leased road as an integral part of its system.

In "consolidation," as the term is here used, one company loses its identity, its property being sold to the other company in consideration of the assumption of its debts by that company, or distributed to its stockholders, which consist of the parent company. The method of consolidation is rarely followed in practice. It has the advantage of simplifying accounts by avoiding the necessity of keeping a distinct set of accounts for each part of the system. But a connecting line may become a burden instead of a blessing to the system, and under consolidation there is no way in which to remove such a burden except

insolvency and reorganization. Whereas, if control is exercised through stock ownership, the burdensome line may be dropped off by redeeming the collateral trust mortgage and selling the underlying securities.¹ Further, consolidation may lead to legal complications. There is always that danger that the courts will declare the consolidation illegal; and, since a case testing its legality may not come up at once, but several years later, when everything has been adjusted to the new order, it is considered advisable not to resort to this method of control. Finally, in case a consolidation were not declared illegal, there is still grave doubt as to the charter rights of the consolidated company. Thus the present Chicago, Rock Island & Pacific Railway Company was a consolidation of the former Chicago, Rock Island & Pacific Railroad Company, an Illinois company, and the Mississippi & Missouri River Railroad Company, an Iowa corporation. The laws of Illinois forbid a railroad company from purchasing and owning the stock of another corporation, the laws of Iowa permit it. What rights are possessed by the present "Rock Island" Railway Company, which is a corporation under both sets of laws? Does it possess the most liberal privileges conferred by each charter or the least liberal? As a matter of practical policy, the solicitors of the company will claim all the privileges they ever enjoyed under either charter; but there are abundant opportunities for legal complications.

Control through common personal ownership in the stock of two or more railway companies was, until recently, illustrated in the method by which the Vanderbilt system was held together. The parts of this system, including the New York Central, the Lake Shore & Michigan Southern, and the Michigan Central, were operated in harmony

¹ This is not true, however, if the interest on the subsidiary company's bonds or dividends on its stock be guaranteed by the parent company.

because the Vanderbilt family held a controlling interest in the share capital of each company. This has its disadvantage in that the death of a single individual may cause the break-up of the whole railway system. In 1898 and 1900 the New York Central purchased the Vanderbilt holdings in the stock of the other two companies, and as much of the remaining stock as was offered, paying for them in $3\frac{1}{2}$ per cent. collateral trust bonds secured by the stock purchased.

This case illustrates a third purpose for which collateral trust bonds may be issued; namely, to more firmly cement the parts of a railway system together. In this case common personal ownership was converted into corporate ownership. In other cases separate holding companies may be organized to acquire and hold the securities of connecting lines. The old Richmond & West Point Terminal Company, which was organized in the interests of the Richmond & Danville, was an instance of this kind. Or, as in the case of the Erie Railway's purchase of the New York, Susquehanna & Western and several other companies in 1901, the collateral trust mortgage may be the means of converting close but informal working agreements with connecting lines into actual control.

We come now to the most important purpose for which bonds in general have been issued, and the purpose second in importance for which collateral trust bonds have been issued. That purpose is the financing of new construction. The general practice in building extensions and branch lines nowadays is to construct these under separate charters. But, instead of selling the securities of the new railway company upon the market, these securities are issued to the parent company, and the latter places upon the market its own collateral trust bonds secured by a mortgage upon these stocks and bonds of the subsidiary

company. This course secures the necessary construction funds as readily and insures to the parent company the control of the new lines.

In practice this method works itself out in two variations. The parent company either advances the necessary construction funds out of its own treasury in exchange for the securities of the subsidiary company, and later reimburses itself by the sale of collateral trust bonds, or, in advance of construction, it gives its collateral trust bonds to the subsidiary company in exchange for the latter's stock and bonds; and the subsidiary company then obtains the needed construction funds by selling the collateral trust bonds thus received.

The collateral trust mortgage issued by the Union Pacific in 1879, already referred to as probably the earliest issue of the kind, was an instance of the first variation. The \$14,376,000 of Trust Five Per Cent. Bonds of the Missouri Pacific Railway in 1887 was another instance, and were secured by the first mortgage bonds of seven subsidiary companies. A similar collateral trust mortgage of 1890 was secured by the bonds of nineteen subsidiary companies which were built in this way. The Illinois Central and the Louisville & Nashville are also among railroad companies which have financed new construction in this way.

This variation has the disadvantage of entailing a considerable drain upon the earnings and working capital of the parent company, perhaps impairing its working efficiency, and especially diverting funds which might have been paid out in dividends to other purposes. And in practice it seems to be less favored than the second variation, namely, the exchange of securities with the subsidiary companies and the sale of the collateral trust bonds in advance of the construction work.

The latter has been a favorite method with the St. Louis & San Francisco, that company having put out four issues

of collateral trust bonds in this way. Other railway companies which have followed this method are the Burlington (1881), the Rock Island (1884), Illinois Central (1886), the Atchison, and the Union Pacific. This method was also followed by the Pennsylvania Company in putting out its Guaranteed Trust Certificates in 1897 and following years. By following this method the drain on the parent company's treasury is reduced to a minimum; namely, the interest upon the bonds issued.

The reasons for financing new construction by means of collateral trust issues are various. To construct new lines under the parent company's charter would often mean that they would automatically become subject to old mortgages. This means that new bonds issued would have a junior lien, and, as the *Commercial and Financial Chronicle* puts it, an investor prefers a first lien upon a specific piece of property to a tenth or twelfth mortgage upon a whole system. If subsidiary companies are organized, these must be controlled either through the lease of their lines or through stock ownership. The first mortgage bonds of the subsidiary companies might be offered directly to the public; but the investor prefers a bond which, in addition to being a first lien upon a specific piece of property, is a direct obligation of the parent company. The collateral trust bond has both of these desirable qualities, and gains additional strength from the fact that frequently the same bond is thus indirectly a first lien, not upon one branch road only, but upon several, thus widening the security. As in insurance, there is safety in numbers.

Again, as already intimated, the control of connecting lines through stock ownership is a possible advantage in that it may enable the latter to rid itself of such lines if they prove unprofitable. Sometimes a subsidiary company can obtain valuable charter privileges. The Rock

Island built the road of the Wisconsin, Minnesota & Pacific under an old charter which exempted its stockholders from the liabilities imposed by the States through which its lines passed.

But the most important reason for constructing additional mileage in this manner consists of the limitations of the parent company's charter privileges. In the first place, a railway company's charter will pretty definitely fix the location and length of the road which may be constructed by it. Thus the Illinois Central's charter empowered it to construct a railroad from Cairo, Illinois, through the central part of the State, to the north-west angle via Galena, and a branch from Centralia to Chicago. If that company wished to construct other mileage within the State, it might be enabled to do this through an amendment to its charter; but in these days of hostility toward corporations it might have to surrender some other valuable charter privilege in exchange for the desired amendment. Further, the powers granted to a railway company in its charter hold only within the boundaries of its birth State; and, if it wishes to push its lines into other States, as all great railway systems do, these lines must be built under separate charters obtained under the laws of the States in which they lie. Hence a great railway system must consist of the lines of a number of smaller or of larger companies all of which are controlled in some way by one great "parent" company. As shown before, where these subsidiary companies sell bonds,—and they usually do,—these bonds will command better prices if they are represented in the market by the parent company's collateral trust bonds.

The foregoing three purposes—namely, funding floating debts, purchasing control over connecting lines, and financing new construction—are the principal purposes

for which collateral trust mortgages have been created. Of these, the last two, which together represent the building and development of railway systems, are *par excellence* the purposes of the collateral trust mortgage. Fifty out of about seventy such mortgages have been created, wholly or in part, for one of these two purposes. The funding of floating debts comes next with eleven such issues to its credit. A few of the more important minor purposes are illustrated in the following paragraphs.

One such purpose of the collateral trust mortgage is to market the companies' securities on more favorable terms than could be obtained otherwise, either by postponing the sale of long-term bonds until market conditions become more favorable or by combining a number of different bond issues and strengthening their security, to give strength to the combination. In the first case the new issue usually takes the form of collateral trust notes which bear a higher rate of interest than the underlying securities and are exceeded by them in par value. Thus the Baltimore & Ohio Southwestern had sustained during 1896-97 a series of disasters which impaired its earnings, so that its First Consolidated $4\frac{1}{2}$ per cent. bonds had declined from 79 to 60. Being in need of funds with which to repair the damages to its track, that company deposited a number of these $4\frac{1}{2}$ per cent. bonds as security for \$675,000 of notes which were turned over to a syndicate in exchange for the needed funds.

On the border between this and the next case are the several collateral trust issues put out by the Seaboard Air-Line Railway Company between 1900 and 1903. The Seaboard Air-Line Railway Company had authorized in 1900 a \$75,000,000 issue of 4 per cent. bonds which were a first lien on 350 miles of railway, and a direct mortgage on 1,010 miles of other road, subject to outstanding prior lien bonds amounting to \$12,748,000, and was a consoli-

dated lien on the remaining mileage of the Seaboard system. The security was not strong enough to sell the bonds. Consequently, as funds were needed, three successive collateral trust issues were substituted. In each of these there was deposited an amount of the unsalable "First Fours," just double the amount of the collateral trust notes or bonds authorized. Two of these collateral trust issues bore 5 per cent. and one 6 per cent. as compared with the rate of 4 per cent. on the underlying bonds. The collateral trust bonds sold at from 100 to 105 as compared with a price of 82 to 90 on the underlying bonds. The Chicago & Alton Railway Company did a similar thing in 1902, issuing \$5,000,000 of 4 per cent. notes against \$7,000,000 of 3 per cent. Refunding Bonds of the Chicago & Alton Railroad Company.

In 1898 the Louisville & Nashville's Unified Four Per Cent. Bonds were selling at from 80 to 90. Wishing to pay off over \$7,000,000 of First Consolidated Mortgage Bonds which matured that year, the Louisville & Nashville placed a twenty-year mortgage upon \$14,000,000 of these Unified Fours and \$4,000,000 of Paducah and Memphis Division bonds, and issued 4 per cent. collateral trust bonds against them. These bonds sold around par. The Louisville & Nashville collateral trust bonds of 1882 were issued for a similar purpose. In this case \$10,000,000 of 6 per cent. bonds were issued against \$28,163,000 par value of a varied list of bonds, and sold at 90.

Still another purpose of collateral trust bond issues is the reduction of fixed charges. This may be done by converting flexible rentals into fixed interest rates. Thus, in 1900, the Mobile & Ohio purchased the stock of the St. Louis & Cairo, whose line it had leased at a rental amounting to 25 per cent. of $\frac{1}{4}\frac{1}{4}\frac{1}{8}$ of its gross earnings, thus substituting a fixed interest charge for this flexible rental. Or bonds with a low rate of interest may be substituted

for preferred stocks with fixed dividend rates. Thus the $3\frac{1}{2}$ per cent. Guaranteed Trust Certificates of the Pennsylvania Company take the place of the 7 per cent. special stock of the Pittsburgh, Ft. Wayne & Chicago, which dividend is guaranteed by the Pennsylvania Railroad.

Three other purposes of collateral trust issues need only be mentioned. These are: (1) to refund previous issues of bonds; (2) to convert a previous bond issue for the purpose of increasing its authorized amount; and (3) to consolidate and unify the mortgages of railroad companies which enter into consolidation. The usual method of accomplishing each of these purposes is by means of a consolidated or general mortgage. The use of the collateral trust mortgage in this way is very exceptional.

So much for purposes of collateral trust mortgages. We may now consider such important features as the provisions in these mortgages for future needs of the railroad company, their interest rates, their security, and their value as investments.

The first of these may be passed over with the observation that collateral trust mortgages do not usually provide for the future needs of the railroad company issuing them, as is now done in all large mortgages which rest directly upon physical property, and need not do so. In exceptional instances this is done. The Southern Pacific Company's collateral trust mortgage of 1899 provided \$28,818,500 for the immediate purchase of the common and preferred stock of the newly reorganized Central Pacific Railroad, and \$8,000,000 for the purchase of preferred stock subsequently to be issued. Five million of this additional Central Pacific preferred was issuable at the rate of only \$200,000 annually for improvements. Thus this collateral trust mortgage provided for certain betterment needs of the subsidiary Central Pacific Railroad for

a period of twenty-five years to come. But this is exceptional, and its purpose was to insure to the Southern Pacific Company the control of all the Central Pacific stock, the issuance of which was provided for in the latter's plan of reorganization.

Provisions for the remote future are not necessary in collateral trust mortgages to the same extent as in consolidated and other direct mortgages. Only one consolidated or general mortgage can be placed upon a railway system; for, since it rest upon the whole or the greater part of the property of the system, any subsequent mortgage must have an inferior lien. Hence such mortgages must contain provision, not only for the immediate, but also for the more remote future. Collateral trust mortgages represent railway lines which have been constructed under separate charters. Whenever more such lines are needed, a new collateral trust mortgage may be created. The number of such mortgages is limited only by the needs and utility of additional branch lines and connections.

In discussing interest features of these mortgages, we may make two comparisons: (1) we may compare the interest rates of the collateral trust bonds with those of the underlying securities; (2) we may compare the interest rates of the collateral trust bonds with those of other bonds of the same company put out at about the same time.

First, the interest rates of collateral trust bonds compared with those of the underlying securities. Collateral trust notes and bonds which are issued to tide over temporarily unfavorable market conditions for the underlying securities usually bear a higher interest rate than does the collateral and have a much smaller par value. Thus the three Seaboard Air-Line Railway collateral trust issues of 1901, 1902, and 1903, referred to above, bore 5 and 6 per cent. as compared with 4 per cent. on the Seaboard "First Fours," which were their security; and their total

par value was half that of the First Fours deposited under them.

The interest rates on collateral trust bonds issued for other purposes sometimes equal the rate on the underlying collateral, but are usually less. The \$25,000,000 of Union Pacific 6 per cent. notes of 1891 were secured by a deposit of over \$39,800,000 par value of 5, 6, and 7 per cent. first mortgage bonds, and over \$58,500,000 of railway stocks and miscellaneous securities. These notes were issued during financial distress. Usually the excess of interest on the underlying collateral will be used as a sinking fund. The Chicago, Rock Island & Pacific Railway collateral trust 5's of 1884 and following years were secured by an equal amount of 6 per cent. bonds of subsidiary companies constructed under this mortgage. Five-sixths of the interest on the underlying securities paid the interest on the collateral trust bonds, the remaining one-sixth was to be invested in the collateral trust bonds themselves.

This difference between the interest rates on bonds and their collateral cannot be considered a saving to the company in such cases, because it was never contemplated that the underlying securities should be sold. The interest rates on this collateral were purposely made higher to create a sinking fund. In certain cases, however, collateral trust bonds have been created for the express purpose of saving in interest charges, by converting bonds with higher rates, or by converting the rentals on leased lines into low interest payments.

The second and more important consideration is, How do the interest rates on these collateral trust issues compare with the interest rates of other bond issues of the same company put out at about the same time? The nominal interest rates on collateral trust bonds have been about the same as those of other bond issues. They were 6 and 7 per cent. about 1880, 5 per cent. in the later '80's,

and are tending downward toward $3\frac{1}{2}$ per cent. But of two bond issues put forth by the same company at about the same time, one being collateral trust, the other having a direct first lien upon railway property, the direct lien will usually command the higher price. Thus the $3\frac{1}{2}$ per cent. collateral trust bonds of the New York Central, issued in 1898, were worth from 93 to 99 in 1900, and those issued in 1900 were worth from 94 to 98, while the $3\frac{1}{2}$ per cent. Refunding Mortgage Bonds of 1897 were worth from 108 to 111. The Erie 4 per cent. collateral trust bonds of 1901 sold at from $92\frac{1}{2}$ to $96\frac{1}{2}$, while at the same time the 4 per cent. Prior Lien Bonds of 1895 were selling at from $95\frac{1}{2}$ to 101. The Chicago, Rock Island & Pacific Railway 4 per cent. collateral trust bonds of 1902 sold at 98 for those maturing in 1904, and at from 82 to 95 for those maturing in 1918, while at the same time the 4 per cent. General Mortgage 100-year Bonds of 1898 sold at from 99 to 108.

An explanation of this unfavorable view of the collateral trust bond is found in its security as compared with the security of direct mortgages upon property. The test whereby to judge this is the comparative treatment received by collateral trust and other issues in times of corporate insolvency and reorganization. But this gives varying testimony. The Philadelphia & Reading collateral trust bonds of 1892 were undisturbed in the subsequent reorganization, and were eventually converted into the new "General Mortgage Fours." In this case the income from the underlying collateral was more than sufficient to pay the 5 per cent. interest on the bonds. In the voluntary reorganization of the Atchison in 1889, the collateral trust issues of 1880, 1881, and 1887, each, with one exception, received 100 per cent. in new 4 per cent. consolidated mortgage bonds, besides bonuses of from 20 to 56 per cent. in new 5 per cent. income bonds. The one exception, a $4\frac{1}{2}$ per cent. issue, received 85 per cent. in new 4 per cent.

mortgage bonds, and 22 per cent. in new incomes. Several of the old 7 per cent. first mortgages received only 100 per cent. in the new Consols and 60 per cent. in new incomes, while the 5 per cent. first mortgages received only 85 per cent. in Consols and 32 per cent. in incomes. This, however, was a voluntary reorganization, and the test of actual insolvency was lacking.

In the reorganization of the Union Pacific in 1896 the collateral trust issues of 1879, 1883, and 1889 were omitted from the reorganization plan, the mortgages under them having been foreclosed separately and the railways represented by them torn from the Union Pacific system, while the principal 6, 7, and 8 per cent. first mortgage bonds of the Union Pacific received 100 per cent. in new 4 per cent. prior lien bonds and 50 per cent. in new preferred stock. The cause of this dismemberment was the difficulty experienced by the Reorganization Committee with the United States Government in regard to the adjustment of its second lien against the property. This difficulty caused a delay of several years; and in the mean time the collateral trust bondholders felt compelled to take independent action in order to save themselves. Eventually, in 1898, these properties were restored to the Union Pacific system. The holders of the 5 per cent. issue of 1883 received \$978.89 on account of the principal and matured interest of each bond, while the holders of the 6 per cent. issue of 1879 realized in full upon their principal and interest.

The Wabash, St. Louis & Pacific 6 per cent. collateral trust bonds of 1883 were subsequently converted into a little more than their par value of 6 per cent. Debenture "B" Bonds, the holders paying 2 per cent. in cash upon the face of the debentures received. These bonds later sank to a merely nominal value. The general mortgage bonds of the old Wabash received precisely similar treat-

ment, however. As before stated, the Wabash, St. Louis & Pacific, owing to its policy of rapid expansion by indiscriminately annexing all the loose odds and ends of railway lines in its vicinity, was in a very poor condition not only financially, but physically. The branches which were represented in the collateral trust bonds were very low in earning power. Again, in the reorganization of the old Richmond & West Point Terminal and Richmond & Danville systems in 1894, which resulted in the present Southern Railway Company, the "Terminal" Company's collateral trust 6's of 1887 received 35 per cent. in new 5 per cent. consolidated mortgage bonds and 90 per cent. in 5 per cent. non-cumulative preferred stock, while the collateral trust 5's of 1889 received 70 per cent. in new preferred stock and 30 per cent. in common stock. These old systems were also in very poor condition. The roadbeds were grown up to weeds, the wooden trestles rotten, the rolling stock was antiquated, some of the locomotives being survivors of *ante-bellum* times, while the books showed such assets as "Fire, \$47,000," "Bills Receivable, Worthless, \$50,000." There was no adequate security to any of those companies' obligations, and all bond issues suffered severely in the reorganization.

Generally speaking, in times of insolvency and reorganization all bond issues stand on their commercial rather than their legal merits. Legal position does count in the case of two or more successive mortgages on identically the same property, and in such cases the reductions of interest or principal are usually borne by the junior bondholders. But in a contest between independent mortgages upon different portions of a railway system—first mortgages upon the main line, various branches, terminals, and equipment, say—the case is different. If the net earnings of the subsidiary company plus the net income which accrues to the parent company from its interchange

of traffic with its subsidiary company are more than sufficient to pay the interest on the latter's bonds, then they are secure, whether they be first or second mortgage bonds; for to allow such mortgages to be foreclosed, and thus dismember the system, would reduce the earning power of the parent organization, and, therefore, its ability to pay interest even on its first mortgage bonds. The same observation applies to terminal and equipment trust bonds. What advantage is it to have a main line, if there are no branches to bring it traffic, no rolling stock to carry this traffic, and no terminals in which to handle it? And, if control of important branch lines be represented by collateral trust bonds, these bonds are perfectly secure. Indeed, they might reasonably come ahead of the first mortgage bonds of the main line if it came to a trial of strength.

If, however, the contributions of a subsidiary company's traffic to the parent company's net earnings, when supplemented by the former's own net earnings, are not sufficient to pay the interest on the subsidiary's company bonds, then these must suffer a reduction of interest or principal, or both. And, if they be represented by the parent company's collateral trust bonds, these must suffer also. Thus a collateral trust issue must stand on its own commercial merits, in a reorganization, the same as issues secured by other types of mortgages. If it represent branches or lines which are essential to the system, its position will be strong. If not, it will be weak.

A weak collateral trust mortgage, however, is more weak than a similar direct mortgage. For, if its collateral consists of mortgage bonds, its own foreclosure is not sufficient to give possession of the physical property; but often many individual underlying mortgages must also be foreclosed. This involves not only great expense, but a long legal delay, during which the physical condition of the property may be deteriorating, so that, when this

property finally comes into the hands of the collateral trust bondholders, its value has been greatly impaired.

If the collateral consists of stock, the value of the bond may be impaired while the system is yet solvent, but perhaps tending toward insolvency through the fact that the parent company may, through its right to vote the subsidiary company's stock, load the latter's property up with mortgages which, of course, come ahead of the stock. In recent collateral trust mortgages, however, attempts are made to avoid this contingency by limiting the parent company's power to place such liens ahead of that of the collateral trust bondholders.

The other contingency—delay—is also avoided in some recent mortgages by empowering the trustee to sell the collateral without foreclosure. The advantage of this provision is illustrated in the case of the Union Pacific 6 per cent. notes of 1891 (which were not secured by mortgage, but merely by an agreement). In the subsequent reorganization these notes received not only their face in cash, but a bonus of 15 per cent. in the preferred stock of the new company as well. Their collateral, however, represented the control of nearly all the smaller branches of the Union Pacific system, and were essential to its success. The recent collateral trust issues of the Rock Island and the New York Central possess the same feature, and this ought to place such issues in better confidence.

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THE SWISS NATIONAL BANK.¹

IN an article published in this *Journal* for April, 1898, entitled "The Bank Note System of Switzerland," Mr. A. Sandoz gave an account of the historical development of the Swiss issue-bank question. The article concluded with the recital of the rejection, at the referendum of February 28, 1897, by 255,984 voices against 195,764, of the law of June 18, 1896,—a defeat which involved the fate of the State Bank.²

Immediately after the referendum of February 28, 1897, two measures were proposed, each of which had in view the erection of a central bank of issue. Both demanded for the bank a legal personality independent of the state, the alternative of a pure state bank having been decisively defeated by the people. On the basis of these two propositions and with expert advice, the federal councillor Hauser prepared a second bill, in which, none the less, the preference of the author for a pure state bank was unmistakably evident. Numerous differences as to the business scope of the institution, the right of accepting interest-bearing deposits, the maximum dividends, the duration of the period of transition, and especially as to the site of the main office, had to be reconciled in the legislative session of June, 1901. An agreement upon all points, with the exception of the last, was reached between

¹ Translated from the German manuscript by W. H. Price.

² For a detailed study consult Landmann, *Das schweizerische Bankgesetz. Untersuchungen zur Geschichte und Kritik der schweizerischen Notenbankgesetzgebung*. . . . Zürich, 1905. This contains a complete bibliography of the Swiss bank question since 1860. See also articles by W. Speiser in the *Revue économique internationale*, iv, No. 3, p. 539, and P. Gyax in *Jahrb. für Nationalök. und Stat.*, III Folge, 30 Band, p. 721.

the two chambers. With respect to the location, agreement was impossible. The National Council (*Nationalrat*) on the 27th of June, 1901, declared its designation of Berné as the chief site of the bank to be final; and when, on the 28th of June, the Council of States (*Ständerat*) just as emphatically declared for Zürich, the proposed measure was wrecked. This rivalry was largely a pretext for disposing of the bill in the parliamentary deliberations, in order to prevent another referendum with its accompanying bitterness.

We come now to the project which finally succeeded. In place of Mr. Hauser (meanwhile deceased) whose adherence to the state bank idea had really wrecked the second bank project, another federal councillor, Comtesse, undertook the direction of the finance department of the council. With a right understanding of the fact that the suitability and efficiency of a central banking institution depended not on the external model, but on internal arrangement and organization, he endeavored to unite the majority at least of the conflicting interests. Before the project of a new bank act could be prepared, it was necessary, in order to proceed with safety, to dispose of the obstacles upon which the previous proposals were wrecked. If we inquire as to the dangers which threatened any bank project, either state or private, we must direct our attention to the following groups of opponents.

First of all there were those uncompromising opponents who vote "no" on principle at every referendum, and whose strength was estimated at about 150,000 votes. There was no possibility of winning these by any concessions in the law.

Next there were the adherents of the federation system (particularly in French Switzerland, but numerous also in certain quarters of German Switzerland) who feared

the federal bank as strengthening the central authority. Here the prospects for assent were more promising. Commercial and industrial expansion has proved more powerful than provincialism. Economic interests and growing political intelligence constantly tend to obliterate local jealousies and the fear of centralization.

With the third group the objections were on behalf of the financial interests of the cantons,—apprehensions of a diminution of cantonal revenue resulting from the decline of earnings of the cantonal banks and a loss of cantonal taxes on bank-notes. The cantons have been passing through a serious financial crisis, and therefore any project, to be successful, would have to indemnify their treasuries for the loss of revenue arising from the centralization of note issue. Article XXXIX of the constitution, which had been drafted with a central bank in view, had provided that at least two-thirds of the net earnings of such a bank should be distributed among the cantons. In order still further to allay anxiety on this score, the bill allowed a very liberal initial compensation to the cantons, and provided for its increase in proportion to population. Finally, by making this compensation in no way contingent upon the net earnings of the central bank, the project offered to the cantons not only an equitable compensation, but an absolutely certain source of income instead of one that was steadily sinking.

The question of location entered as a further obstacle. Whether Berne or Zürich should be selected as the chief site of the bank, a determined opposition would at once arise in the city that was passed over. Berne, supported by Basel and Geneva and by French-speaking and north-west Switzerland, claimed the bank on the ground that the public bank should be in the political capital of the country. Zürich, supported by her neighbors, by north-east and eastern Switzerland, contended that the bank

should be located in the financial centre of the country,—a position claimed by Zürich. The solution of this problem¹ was first found during the parliamentary debates over the measure. The bill as first presented had contained no designation of the site of the bank, deferring this to a special federal act.

Finally, of course, whether the bank partook more of public or more of private character, the advocates and opponents of state enterprise would necessarily be placed in more or less sharp opposition upon the project.

With these considerations in view, the author of the new bill united in the proposed institution the character of a private with that of a state bank. The bank partook of the character of a private bank in the sense that some of the stock was privately owned and in that the individual stockholders were able to exercise a definite influence upon its policy. At the same time the organization was such as to concede to the friends of the state bank idea that the greater part of the capital should be furnished by the public authorities, that the net earnings of the bank should go exclusively to the federation and to the cantons, and that the selection of a majority of the members of the directorate should be placed in the hands of the federal council.

The parliamentary consideration of the measure, the details of which cannot be given here, proved to be comparatively brief. In December, 1904, the Council of States dealt with the matter. In March and June, 1905, the National Council discussed the proposition laid before them by the Council of States. In September and the early days of October the differences between the two chambers were reconciled, and on the 6th of October, 1905, the law was finally adopted. On the 11th of October, 1905, it was promulgated in the *Bundesblatt*. Some members of the

¹ See below, pp. 476-477.

social-democratic party who favored nothing but a strict state bank, with entire exclusion of private capital, led a referendum agitation, but without success; for up to January 9, 1906, when the referendum period expired, the number of signatures was not sufficient to require the popular vote. Consequently, the federal council on the 16th of January, 1906, declared the law to be in force. The nature of that law we shall now describe more in detail. Its main provisions law may be analyzed under three heads: (1) the legal and financial basis of the bank; (2) business scope; (3) administrative organization.

(1) *Legal and Financial Basis.*

By the act of October 6, 1905, is established a juristic personality, to be known as the Swiss National Bank, the administration of which is regulated by the special provision contained in the law itself and in the regulations approved by the federal council.

The capital of the national bank consists of fifty million francs, distributed in 100,000 shares. At the opening of the bank the share capital must all be subscribed, and one-half must be paid in. A minimum dividend is not guaranteed. The maximum dividend is fixed at 4 per cent.

Two-fifths of the share capital is to be assigned to the cantons in proportion to their populations, to be subscribed for within their limits. One-fifth of the share capital is reserved for the banking institutions previously exercising the right of note issue (on the ground of the law of 1881) in proportion to their issues outstanding on December 31, 1904. The last two-fifths of share capital, as well as any shares offered to the cantons and to the banks of issue and not accepted by them, will be offered to public subscription. Only Swiss citizens, or firms domiciled in Switzerland or juristic personalities or corporations which have their

home offices in Switzerland, are to be admitted to subscription.

The bank has a monopoly of note issue. The federation grants to it for the next twenty years the exclusive right to issue bank-notes. The service of the bank in return for the enjoyment of this monopoly consists in fulfilling the duties assigned to it by the law, and in the payment of a license tax yearly to the federation, which is pledged to transfer this contribution undiminished to the cantons. This payment by the bank to the cantons through the agency of the federal government constitutes the recompense to the cantons for their loss of revenue arising from the centralization of the note-issue system. At the outset, it is based both upon the previous note issue and on population, but after fifteen years it will consist entirely of the fixed payment of eighty centimes per head of population in each canton. This license tax is distinctly a payment by the national bank for the monopoly of issue conferred upon it.

The law prescribes the following rules as to the division of the net profits. From the year's earnings, as shown by the profit and loss account, 10 per cent. (but never more than 50,000 fr.) goes to the reserve fund of the bank, until this shall have risen to 30 per cent. of the share capital. After that a dividend of 4 per cent. on the share capital is to be distributed. After the dividend the contribution constituting the license tax is to be paid over to the federation. Of the remainder of the clear profits, two-thirds is to go to the cantons and one-third to the federation.

The license tax is guaranteed by the federation to the cantons to the full amount. In case the annual profits of the bank, after the payment to the reserve fund and the distribution of dividends, are insufficient for the payment of the license tax, the deficit is to be advanced by the federal treasury. The national bank must pay

back to the treasury such advances, with $3\frac{1}{2}$ per cent. interest, as soon as its profits permit. Such repayment is to take place in the next year before the division of net profits remaining after the payment of the license tax.

The co-operation and control of the federation are secured, as will be presently set forth in detail, through the selection of the bank's officers at the hands of the federal council; through the council's power of approving all regulations, reports, and accounts; through the report which the federal council makes to the assembly; and through the functions of control entrusted to the officials of the finance department.

(2) *Business Scope.*

The duty of the National Bank is to regulate the currency of the country and to facilitate payments. Its scope is that of a pure bank of issue, deposit, and discount. The operations which the bank is authorized to conduct are enumerated as follows in Article XV. of the law:—

1. Issue of bank-notes according to the provisions of this law.
2. Discount of Swiss commercial paper (*Wechsel*) of not more than three months' duration, and with at least two signers of known solvency. Paper originating in agricultural business, which is based on commercial transactions, may be discounted on the same terms as any other.
3. Purchase and sale of exchange on foreign countries whose currency is on a metallic basis. The maturity of bills of exchange may not exceed three months, and they must have at least two signatures of known solvency.
4. Loans at interest for not more than three months upon collateral in the form of securities and evidences of debt (*Lombard-verkehr*). Stocks may not be accepted as collateral.
5. Deposits of cash without interest; and, at interest, of the cash of the federation and of its departments of administration.
6. Domestic transfer and collection business, and check accounts. [*Giro- und Abrechnungverkehr, Mandate und Inkasso*].

7. Purchase of interest-bearing bonds, payable to bearer, of the federation, of the cantons, or of foreign states, but only for the purpose of temporary investment.

8. Purchase and sale of the precious metals in bars and coins for domestic and foreign account, as well as loans on such specie.

9. Issue of gold and silver certificates.

10. Acceptance of commercial paper and objects of value for safe deposit and administration.

11. Negotiating, on commission; loans offered for subscription by the federation and the cantons; but participation in the permanent assumption of such loans is excluded.

Furthermore, the National Bank, with all its branches, is obliged to receive payments on account of the federation and its administrative departments and to make payments to the extent of the federal balance, as well as, on the demand of the federation, to undertake the safe-keeping or the administration of property belonging to the federation.

It will be seen that neither from note circulation as such nor from uncovered note circulation is any sort of a tax raised. The National Bank is thus given power to restrict or expand its note issues with no other concern than for the needs of business.

On the other hand, so far as the protection of notes issued is concerned, the provisions of the bank act go far beyond those of the law of 1881. They impose upon the national bank requirements to which neither the banks organized under the last-named act, nor institutions such as the German Reichsbank or the Bank of England are subjected. The security of note issues of every bank is regulated by law. But the Swiss National Bank Act secures not only the notes, but other demand liabilities as well. The specie reserve against bank-notes, in legal money, gold bars, or foreign gold coin, must amount to at least 40 per cent. of the amount in circulation. For the 60 per cent. not covered by specie there must be an equivalent of Swiss discounted paper. Further, the bank must hold against

its short-time liabilities, whether payable on demand or on ten days' notice, an equivalent in cash or in Swiss commercial paper.

Only at its office in Berne is the National Bank pledged to the unconditional and immediate redemption of its notes in specie to any amount. In the dealings of all other branches and of all agencies, redemption must be maintained only so far as may be warranted by the existing balances and the need of specie on the part of the branches or agents; but, in any case, notes must there be redeemed within the time needed for procuring the specie from the central office.

The notes of the bank are not made legal tender. The National Bank itself and the federal treasury are alone pledged for the acceptance of these notes at any time. But the federal council has power in time of war to decree general legal tender quality for the notes.

(3) *Organization.*

The compromise which was arranged upon during the parliamentary discussion with respect to the question of the chief site of the bank was, in short, this. The bank has not one site, but many. No establishment of the bank is to be managed directly by the national bank directorate. Each has its own independent local board. There exists among the branches no distinction of position or leadership. A group of mutually equal and independent branches, united under common direction and oversight, constitutes the National Bank.

The legal and administrative site of the National Bank is at Berne. At Berne the general meeting of stockholders is held, that of the bank council, and, as a rule, that of the bank committee also. The site of the directorate, on the other hand, is in Zürich.

In addition to the sites at Berne and Zürich the bank is authorized to erect others in the important business centres of Switzerland. Business may begin after the organization of at least four establishments. The bank is authorized to employ agents in places in which no branches are to be opened. A canton in which no branch is erected has the right to demand the creation of an agency in its territory.

The law provides for a general meeting of stockholders, a bank council (*Bankrat*), a bank committee (*Bankausschuss*), local committees, and audit commissions,—these for supervision and control; and a directorate (*Direktorium*) and local directorates for management.

The *general meeting of stockholders* takes place at least once a year. Every share has a vote, with the proviso that a private shareholder may not have more than one hundred votes. The power of the general meeting is very limited. It has to consider the report and the accounts, and, subject to the provisions of the law, to determine the net profits. It has the right (its most important right and its sole means of influencing the conduct of the bank) of electing fifteen members to the bank council. It elects the audit committee, and decides upon the acquisition of existing banks. It has the right (subject to the approval by the federal assembly) to increase the capital of the bank.

The *bank council* is given considerably greater powers than the shareholders' meeting. To it belongs the general supervision of the business and management. The bank council consists of forty members, of whom the shareholders elect fifteen and the federal council elects twenty-five, the term of service being always one year. Among those elected by the federal council are the president and vice-president of the council. Of the remaining twenty-three elected by the federal council, only five may belong to the national assembly and five to the cantonal governments. In their election regard is to be had to the suitable rep-

resentation of the banking, manufacturing, and commercial centres. The members of the bank council must be Swiss citizens resident in Switzerland.

The bank council elects five members of the bank committee. It appoints the local committees and makes nominations to the federal council for the directorate and the local directorates. It examines regulations requiring the approval of the federal council, and reports and accounts prepared by the directorate and the bank committee. On recommendation of the bank committee and of the directorate it fixes the salaries of the officers and employees of the bank, within maximum and minimum limits determined by the by-laws. The proposals of the shareholders' general meeting are considered and decided by the bank council. Lastly, the bank council reaches final decision on all business transactions amounting to more than five million francs and all extensions of credit of more than three million francs.

The *directorate* of the National Bank, a body consisting of three members, is the sole managing authority. It is elected by the federal council, on the nomination of the bank council, for a six-year term; and the federal council names its president and vice-president. The business of the directorate is divided between three departments,—the department of discount and deposit, that of control, and that of note issue. One member of the directorate manages each department. The members who manage the two first-mentioned departments, one of whom must be the president of the directorate, have their headquarters at Zürich. The manager of the note-issue department (to whom belongs the administration of the cash reserve and all transactions with the government) resides in Berne. The directorate exercises all functions which are not by law reserved to the federal council, the shareholders' meeting, the bank council, or the bank committee (see

below). Its most important function is that of fixing the rates of discount and interest. For this the judgment of the bank committee and the views of the directors of the chief branch banks have to be consulted.

The *local directorates* are immediately subordinate to the general directorate. Each local directorate consists of a director and a sub-director, elected for a six-year term. They are responsible for the management of the business in their respective branches.

Subordinate to the directors (as well as to the several local directorates) are all the other officials of the bank. All have the rank of state officials. As regards the mode of appointment, they fall into the four following groups: (1) The members of the directorate, the sub-directors acting under them, the directors and sub-directors of the local directorates, are appointed by the federal council on nomination of the bank council. (2) Officials and subordinates of the directorate and of the branches whose salaries amount to 4,000 francs are appointed by the bank committee, on nomination of the directors. (3) Officials whose salaries do not amount to 4,000 francs are appointed by the directors. (4) Officials of the branches whose salaries do not amount to 4,000 francs are appointed by the local directorate.

The staff of salaried officers (who, it is to be noted, receive no *tantièmes*, as is the case with the Imperial Bank of Germany) is supplemented by the bank committee and the local committees. These bodies give a guarantee of oversight in the interest both of creditors and of customers, facilitate settled relations between the officers and the business world, and prevent purely bureaucratic administration.

The bank council exerts only a periodic control over the bank. Continuous detailed control and supervision is delegated to a standing committee of the bank

council. This *bank committee* consists of the president and vice-president of the bank council (who discharge *ex officio* the functions of president and vice-president of the committee) and five members of the bank council chosen for a four-year term. In addition to the general powers of supervision and control conferred upon this committee, it appoints certain officials, as has just been noted, and further discharges the following special duties. It considers all transactions which are to be conducted by the bank council, and all changes in the rate of discount and interest proposed by the directorate. Transactions and credit extensions exceeding in amount one million francs, so far as they do not require the approval of the bank council, must be approved by the committee.

As the bank committee is related to the directorate of the bank, so are the *local committees* related to the local directorates of the branches, which, according to the importance of the places, consist of three or four members, chosen by the bank council for a term of four years from among the more important merchants and manufacturers of the vicinity. To these local committees belongs, besides the powers of nomination already mentioned, the supervision over the branch, for which purpose they meet as often as there may be occasion.

Over and above the control exercised by the bank council, the bank committee, and the local committees, there exist for the National Bank two further boards of control,—the audit commission (*Revisionskommission*) and board of control of the federal council. The audit commission is a representative of the shareholders' meeting, and is elected by the latter. Its members have the right at any time to make inquiry as to the entire business. The commission must audit the annual accounts and the balance sheet of the bank, and make a written report to the general meeting of the result of this audit,

which is also to be communicated to the federal council. This audit commission, responsible to the general meeting, supplements the board of control, which is named by the federal council, is responsible to it, and is attached to the federal finance department. While the authority of the audit commission extends to the control of the business operations, the board of control of the federation supervises the general management of the bank, the relation of the several parts of its organization one to another, and safeguards the general economic and especially the monetary interests of the country.

Among the provisions of the act which regulate the period of transition, only those will be mentioned here which refer to the liquidation of note issue, authorized by the law of 1881.

By the law of March 8, 1881, every banking institution, provided it conformed to the prescribed conditions, was entitled to claim from the federal council the privilege of note issue. This demand the federal council was obliged to grant. From the date at which the National Bank Act takes effect the federal council is empowered to refuse such demands.

On the opening of the National Bank the banks of issue organized under the law of 1881 are obliged to withdraw their issues within three years. They are bound during this period of three years to deliver for cancellation, to an office of control designated by the federal council, at the end of each quarter at least one-twelfth of their circulation authorized at the time of the opening of the National Bank, or, in default of such delivery, to pay for deficits in this quota to the National Bank. The National Bank on its part is bound to facilitate as far as possible for the banks of issue the liquidation of their notes by affording them loans upon securities.

Until the complete liquidation of these notes the pro-

visions of the law of 1881 with respect to banks of issue remain in force. Their notes also will be accepted in payments during the three-year withdrawal period by the several branches of the National Bank, and the National Bank will arrange for the redemption of these notes within a period of three days without charge. After the expiration of the three-year withdrawal period (and, for the banks which before the expiration of this period have already deposited to the National Bank the equivalent of their outstanding issues, from the date of such deposit) the National Bank undertakes for itself and its successors the duty of redeeming within the next thirty years notes of the banks of issue still circulating. After the expiration of this period the obligation on the National Bank of redeeming such notes expires, and the equivalent of the unredeemed part goes to the federal pension fund.

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- DEVINE (E. T.). Efficiency and Relief. New York: Macmillan. 1906. 12mo. pp. 45. 75 cents.
[Inaugural address as Professor of Social Economy in Columbia University.]
- FROMENT (Y. E. de). L'assistance légale et la lutte contre le paupérisme en Angleterre. Paris: Larose. 1905. 8vo. pp. 184.
- FROMONT (L. G.). La journée de huit heures dans l'industrie chimique et métallurgique. Liège: Vallant-Carmagne. 1905. 8vo. pp. 106. 2.30 fr.
- GLASSES (M. E.). La condition des ouvriers des mines en Australasie. Étude économique et social. Paris: Dunod et Pinat. 1906. 8vo. pp. 348. 6 fr.
- GONNARD (R.). La femme dans l'industrie. Paris: Collin. 1906. 18mo. 3.50 fr.
- HATCH (E. F. G.). A Reproach to Civilization. London: Waterlow. 1906. 8vo. pp. 110. 1 s.
[Deals with the problem of unemployment.]
- HEISS (C.) and KOPPEL (A.). Heimarbeit und Hausindustrie in Deutschland. Ihre Lohn- und Arbeitsverhältnisse. Berlin: Puttkammer u. Mühlbrecht. 8vo. pp. 232. 3 m.
[Issued in connection with an exposition held in Berlin by the Bureau für Sozialpolitik.]
- HOLLANDER (J. H.) and BARNETT (G. E.). Studies in American Trade Unionism. New York:

- Henry Holt & Co. 8vo. pp. 280. \$2.75.
[Contains eleven essays by members of the Economic Seminary of Johns Hopkins Univ., with introduction by Prof. Hollander. An interesting and valuable contribution.]
- HOLYOAKE (G. J.). *Sixty Years of an Agitator's Life*. London: Unwin. 1906. 8vo. pp. 332. 2s. 6d.
- . *The History of Co-operation*. 2 vols. London: Unwin. 1906. 8vo. pp. 354, 386. 21s.
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- HOWELL (G.). *Labour Legislation, Labour Movements, and Labour Leaders*. New York: E. P. Dutton & Co. 2 vols. \$2.50.
[A second edition, with slight corrections.]
- LALLEMAND (L.). *Histoire de la charité*. Tome III. Le moyen âge. (Du X^e au XVI^e siècle.) Paris: Picard. 1906. 8vo. 8 fr.
- PENTY (A. P.). *The Restoration of the Guild System*. London: Sonnenschein. 1906. 16mo. pp. 114. 3s. 6d.
- PIERACCINI (G.). *Patologia del lavoro*. Milan: Società Editrice Libreria. 1906. pp. 695. 19 l.
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- RYAN (J. A.). *A Living Wage*. New York: Macmillan. 1906. 12mo. pp. 346.
[An argument by a Catholic economist, based on moral and economic grounds, for a living wage.]
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- . *Die Weber der Gegenwart*. Sozialpolitische Wanderungen durch die Hausweberei und die Webfabrik. Jena: G. Fischer. 8vo. pp. 214. 4 m.
- UNSIGNED. *Report of the Royal Commission on Trade Disputes*. London: Wyman & Sons. 1906. 9to. pp. 132. 1s. 1d.
[The Reports (majority and minority) and documents deal chiefly with the liability of Unions, as adjudicated in the Taff Vale case; picketing and conspiracy are also touched. An appendix gives a summary of statutes and decisions.]

In Periodicals.

- ALINGTON (C. W.). *Aspects of Unemployment in West Ham*. Econ. Rev., Jan. [Some observed facts mingled with a good deal of speculation.]
- BACHI (R.), COLETTI (F.), MONTMARTINI (G.). *Del costo degli scioperi per la classe lavoratrice*. Giorn. degli Econ., Jan.
- BÖDIKER (T.). *Vereinfachung der Arbeiterversicherung*. Jahrb. f. Gesetzg., 1906, Heft 1. [An earnest argument for reform in the administration of workmen's insurance in Germany.]
- BRECKINRIDGE (S. P.) and ABBOTT (Edith). *Employment of Women in Industries*. Journ. Polit. Econ., Jan. [An inquiry as to Twelfth Census Statistics, which are found unsatisfactory as to the essential problems.]
- COLETTI (F.) and MONTMARTINI (G.). *Del costo degli scioperi per la classe lavoratrice*. Giorn. degli Econ., Dec., Feb.
- FRANKENBERG (H. von). *Die Krankenkassen und die Volkserziehung*. Jahrb. f. Gesetzg., 1906, Heft 1.
- FREY (J. P.) and COMMONS (J. R.). *Conciliation in the Stove Industry*.

- Bulletin Bureau of Labor, Jan., 1906. [A valuable investigation.]
- HOWARD (E. D.). The Condition of the German Workingman. Journ. Polit. Econ., Feb. [A chapter from a prize essay, giving miscellaneous information.]
- JANNACONE (P.). Sul costo degli scioperi nei gruppi di lavoratori. Riforma Soc., Jan.
- . Salari e risparmi nel costo degli scioperi nei lavoratori. Riforma Soc., March.
- LAUDA (M. J.). The Economic Aspect of Alien Labor. Econ. Rev., Jan. [Concludes that the influx of alien workers is not damaging to the native skilled workers.]
- LAUGHLIN (J. L.). The Unions versus Higher Wages. Journ. Polit. Econ., March. [Maintains that the union policy has been bad, that they should aim to raise wages by increasing the productivity of labor.]
- LOBIA (A.). Ancora intorno al costo degli scioperi. Riforma Soc., Feb.
- MAGRINI (E.). I risultati dell' inchiesta-referendum sulle abitazioni popolari in Torino. Riforma Soc., Feb.
- MUGDAN (O.). Zur Reform der Arbeitsversicherung. I. Zeitschr. f. Socialw., March.
- RÜDLIN. Wohlfahrts-einrichtungen der preussisch-hessischer Eisenbahnen in 1904. Archiv f. Eisenh., 1906, Heft 1. [Describes the arrangements against tuberculosis and alcoholism, pension and insurance organization.]
- SAUCKE (A.). Der durchschnittliche Jahresarbeitsverdienst für land- und forstwirtschaftliche Arbeiter im Jahre 1905. Jahrb. f. Nat. Oek., Feb.

III. SOCIALISM.

- BERNSTEIN (E.). Die heutige Sozialdemokratie in Theorie und Praxis. Munich: G. Birk. 1906. 8vo. pp. 61. 1 m.
[A pamphlet published in reply to newspaper attacks.]
- BRETRY (P.). Le socialisme et les jaunes. Paris: Plon-Nourrit. 1906. 16mo. 3.50 fr.
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[The author was an active member of the International. This first volume of his memoirs (two further volumes will follow) covers the years 1864-78. The book contains important material on the history of socialism.]
- MONEY (L. G. C.). Riches and Poverty. Second edition. London: Methuen. 1906. 8vo. pp. 338. 5s.
[A study of the distribution of wealth in Great Britain, with proposals for reducing inequality.]
- The author's ultimate remedy is socialism.]
- REEVE (S. A.). The Cost of Competition. New York: McClure, Phillips & Co. pp. 617. \$2.
[An interesting study of the wastes of the competitive process, with proposals for socialistic reforms.]
- SOMBART (W.). Sozialismus und soziale Bewegung. 5^{te} neugearbeitete Auflage. 1906. Jena: G. Fischer. 8vo. pp. 335. 2 m.
[The first edition was published in 1897, and translated into English 1898.]
- SWIFT (M. G.). Marriage and Race Death. New York: Swift Press. 1906. 12mo. pp. 270. \$1.10.
[Socialistic view of marriage.]
- TROELTSCH (W.) and HIRSCHFELD (P.). Die deutschen sozialdemokratischen Gewerkschaften. Untersuchungen über ihre geogr. Verbreitung 1896-1903. Berlin: C. Heymann. 1906. 8vo. pp. xvi, 298, 147. 12 m.
- In Periodicals.
- GÜNTHER (E.). Die revisionistische Bewegung in der deutschen Sozi-

aldemokratie. II. Jahrb. f. Gesetzg., 1906, Heft 1. [Concludes that, as long as social and political conditions in Germany remain as they are, no refutation of Marxism,

whether by outsiders or by socialists, will have any effect on the character of German social democracy.]

IV. LAND AND AGRARIAN PROBLEMS.

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Mosso (A.). Vita moderni degli Italiani: saggi. Milan: Fratelli Treves. 1906. 16mo. pp. 430. 4 l.

[Contains essays on emigration, the country population, North and South, and the like.]

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[Reprinted from Proceedings of the Agricultural Institute of Breslau.]

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SCHMIDT (B.). Statistisches zur Entwicklung der deutschen Landwirtschaft. Zeitschr. f. d. ges. Staatsw., 1906, Heft 1.

V. POPULATION AND MIGRATION.

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[A study of the deleterious effects of town life upon the population of Great Britain.]

HALL (P. F.). Immigration and its

Effect upon the United States. New York: Henry Holt & Co. 12mo. pp. 393. \$1.50.

[Author is secretary of an anti-immigration society. His book is a convenient summary of information upon the subject.]

LEWIS (C. J. and J. N.). *Natal-ity and Fecundity: A Contribution to National Demography.* London: Oliver & Boyd. 1905. 8vo. pp. 178. 7s. 6d.

In Periodicals.

GHIO (P.). *L'émigration italiana.* Journ. des Écon., March. [Attributes emigration in large part to oppressive taxation.]

VI. TRANSPORTATION.

BETOCCHI (C.). *Il futuro ordinamento ferroviario ed il Mezzogiorno d'Italia: studi e proposte della commissione speciale dei trasporti.* (Camera di commercio ed arti di Napoli; ufficio di statistica.) Naples. 1905. 8vo. pp. 222.

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[The authors are members of the Prussian Ministry of Public Works, and give the results of an official tour of investigation in 1904. Much of the descriptive matter is familiar,—on organization, finance, and the like. Two chapters analyze freight and passenger rates, and find that, with proper allowances, Prussian rates are not higher.]

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COHN (G.). *Art. 54 der Reichsverfassung.* Zeitschr. f. d. ges. Staatsw., 1906, Heft 1. [For revision of article imposing tolls on watercourses. A rambling article.]

LEYEN (A. v. d.). [Meyer's] *Government Regulation of Railway Rates.* Archiv f. Eisenb., 1906, Heft 2. [An extended unfavorable review of H. R. Meyer's book, with some detailed correction as to the Prussian situation. A translation of part of this notice is printed in the Amer. Journ. of Sociol. for March.]

LIESSE (A.). *L'exploitation des chemins de fer et la question du rachat.* Journ. des Écon., Feb. [Opposes the repurchase of the Compagnie de l'Ouest.]

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advantages of localities, and thus check freedom of trade in the United States.]

ROCHETIER (E.). Paris port de mer. Journ. des Écon., March. [Optimistic project of a deep canal from Paris to the sea.]

SCHNEIDER (A.). Zur Rentabilitätsberechnung der Personen- und Güterzüge unter Zugrundelegung der Verhältnisse der badischen

Staatseisenbahnen. Zeitschr. f. d. ges. Staatsw., 1906, Heft 1.

STICKNEY (A. B.). Regulation of Railway Rates. Pol. Sci. Quart., March. [Rebates are the result of competition. An investigation of them by a special commission should precede any legislation.]

TAJANI (F.). L'esercizio ferroviario di stato in Italia. Giorn. degli Econ., Jan.

VII. FOREIGN TRADE AND COLONIZATION.

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[A searching arraignment of the economics and politics of imperialism.]

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KELLER (A. G.). Portuguese Colonization in Brazil. Yale Rev., Feb. [A careful historical study.]

MAREZ OYEMS (M. de). Le rapprochement entre la Hollande et la Belgique. Rev. Econ. Intern., Feb. [From the Dutch point of view.]

MEREDITH (H. O.). Protection of Young Industries. Econ. Journ., March. [The possibility of such protection being advantageous is admitted, the probability doubted. Concentration on certain "young" industries is advised, but with little hope that any country will take the advice.]

OSEROFF (I.). La question sucrière en Russie. Rev. Econ. Intern., Jan. [Why Russia withheld from the Brussels convention.]

ROCHUSSEN (T.). Die Bedeutung der Zahlen der sogenannten passiven Handelsbilanz. Jahrb. f. Nat. Oek., Jan.

VIII. MONEY, BANKING AND EXCHANGE.

- DEPITRE (E.). Le mouvement de concentration dans les banques allemandes. Paris: Rousseau. 1905. 8vo. pp. 236. 5 fr.
- DUBOIS (J.). L'empire de l'argent. Etude sur la Chine financière. Paris: Guilmots. 1906. 8vo. 5 fr.
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[Treats subject in practical, theoretical, and legal aspects; intended for bank officials and students of commerce.]
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[L. Say's well-known report on the payment of the indemnity is incorporated as part of this paper.]
- JOHNSON (J. F.). Money and Currency. Boston: Ginn & Co. 1906. 8vo. pp. 396. \$1.75.
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- SELLA (E.). La speculazione commerciale e le crisi di produzione. Turin: Fratelli Bocca. 1906. 8vo. pp. 270. 5 l.
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- VILLA (U.). La casa di S. Giorgio: memorie e documenti. Geneva. 1905. 16mo. pp. 137. 3 l.
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- SCHACHNER (R.). Die staatliche und kommunale Sparkassenpolitik der neuesten Zeit. Jahrb. f. Nat. Oek., Feb.
- VISSENING (G.). La bourse d'Amsterdam comme centre financier d'aujourd'hui. Rev. Econ. Intern., March.

IX. FINANCE AND TAXATION.

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[Very valuable to students of finance. Gives the best account available of the law relating to the taxation of corporations in the United States.]
- BUCHAN (J.). The Law relating to the Taxation of Foreign Income. London: Stevens. 1905. 8vo. pp. lxxxiv, 123. 10s. 6d.
[Preface by R. H. Haldane.]
- BULLOCK (C. J.). Selected Readings

- in Public Finance. Boston: Ginn & Co. 1906. 8vo. pp. 671. \$2.25. [Prepared for use of classes.]
- CARCANO (C., Ministre). Exposé financier du royaume d'Italie. Rome: Butero. 1906. 4to.
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- COHN (G.). Die Reichssteuerreform. Jahrb. f. Nat. Oek., Jan.
- EDGEWORTH (F. Y.). Recent Schemes for Rating Urban Land Values. Econ. Journ., March. [A continuation of Professor Edgeworth's article in the same journal for Dec., 1900; discussing acutely the recent Royal Commission Report, and showing how untenable are the common arguments against such taxation.]
- HOFFMAN (U.). Die Reichserbschaftsteuer. Ann. des Deutsch. Reichs, 1906, 1 and 2. [A study of the proposed tax recently laid before the Reichstag. Author advocates its adoption.]
- KEHM (O.). Zur Geschichte der Besteuerung des Tabaks in Hesse-Darmstadt. Fin. Archiv, 23, 1. [Deals with period from 1640 to 1828.]
- KÖPPE (H.). Ist die Werthzuwachssteuer überwälzbar? Fin. Archiv, 23, 1. [The tax cannot be shifted.]
- MEYER (H.). Ueberblick über die französischen Einkommensteuerprojecte nach Annahme der Resolution vom 10 Februar, 1887. Fin. Archiv, 23, 1. [A valuable study.]
- ORTLOFF. Besteuerung der Konsumvereine. Jahrb. f. Nat. Oek., Feb. [Against the policy of repressive taxation of co-operative associations initiated in a number of German states to protect the small retailers.]
- PRATO (G.). Finanza di guerra al Giappone. Riforma Soc., Jan.
- SCHMIDT (A.). Die Tarife der deutschen Reichs-Post- und Telegraphenverwaltung. Fin. Archiv, 23, 1. [An exhaustive investigation.]
- VEOCHIO (G. del). La riforma tributaria nel Comune di Alessandria. Riforma Soc., March.
- WAGNER (W.). Die finanzgebarung des Deutschen Reichs und der Deutschen Bundesstaaten. Fin. Archiv, 23, 1. [A valuable review of the finance statistics of the empire and the several states, now collected by the imperial statistical bureau.]
- ZUCCOLI (G.). Contro una perequazione tributaria. Riforma Soc., March.

X. CAPITAL AND ITS ORGANIZATION: COMBINATIONS.

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- HIRST (F. W.). *Monopolies, Trusts, and Kartells*. London: Methuen & Co. 12mo. pp. 179. 2s. 6d.
[An interesting and useful study by a believer in free competition.]
- MEYER (H. R.). *Municipal Ownership in Great Britain*. New York: Macmillan. 1906. 8vo. pp. 340. \$1.50.
[Treats of British experiments with municipal tramways, gas, and electric lighting plants. Consistently critical toward municipal ownership.]
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THE
QUARTERLY JOURNAL
OF
ECONOMICS

AUGUST, 1906

WAGES AND PRICES IN RELATION TO INTER-
NATIONAL TRADE.

THE main thesis of this paper is that, in considering the working of international trade, attention should be paid more to the range of money incomes, and less to the range of prices, and that, in gauging the advantages which a country secures from international trade, we should look primarily to the range and the variations of money incomes.

It is usually set forth that the country where prices are highest gains most from international trade, and the country where prices are lowest gains least. The range of prices obviously enough is not *per se* of consequence. High prices simply mean the use of more counters in exchange. But in buying imported commodities those whose domestic transactions are carried on with many counters have an advantage. Foreign goods are not so high in price, and are procured more easily. Conversely,

countries with low prices are ill off as regards imported goods, which are bought on hard terms by people whose scale of money prices is low.

This statement of the case would be open to no exception if the words "money incomes" were used throughout when stating the situation of the people of a given country. It is high money incomes that are of consequence in international trade, not high prices. In fact, a country may have, not high prices, but low prices, and still be in an advantageous position as regards international trade. High money incomes do not necessarily or commonly mean high prices. It is by a consideration of the relation between money incomes and prices, of the possibilities of divergence or parallelism between them, that some contribution may perhaps be made toward better understanding the phenomena.

Let us consider, for this purpose, a country in which wages and other money incomes are high. The United States serves our purpose. It has a high range of money incomes. It is commonly thought to have also high prices. Let us compare its situation with that of the European countries with which it trades, and ascertain wherein it gains, and how far its gains are connected with the prices of goods and the money rates of wages and other incomes. For the sake of simplicity, in speaking of the United States and of other similar countries, I shall use indifferently the terms "money wages" and "money incomes," leaving it to be understood that, with due allowance for causes of possible difference, not wages only, but other money incomes as well—rents, profits, interest, the earnings of independent farmers or artisans—tend to be correspondingly high.

We may begin by recalling some of the familiar principles of international trade. Under a state of freedom, goods that are imported and exported will sell at approximately

the same prices the world over. There will of course be differences from cost of transportation. Imported goods will sell at prices higher than their prices in the exporting countries by the amount of cost of carriage. Sometimes a commodity that newly enters into foreign trade—one that a shrewd merchant discovers to be cheap in one country and salable in another—will sell in the importing country at a large advance; and doubtless the action of competition in levelling profits and reducing such differences of prices to the “normal” point is not so quick and thorough as the economists are disposed to believe. But, on the whole, we may reason on the assumption that, under conditions of freedom, those commodities that enter into international trade have a common price the world over. The extraordinary cheapening of transportation during the last half-century, the easy transmission of news, the perfected organization of markets and exchanges, contribute to make this assumption a safe one for all the great staples. Customs duties, of course, are an important cause of differences in price. Of these something more will be said presently. But the fundamental principles can be best elucidated by tracing their operation under free trade.

Every country will export those things which are cheap in its borders,—whose prices are so low that they can be shipped to foreign countries and still sold at the advance needed to cover cost of carriage. And those things will usually be cheap which are produced with a comparatively small amount of labor,—those in which the efficiency of labor is great. A country with high money wages, like the United States, can yet put goods on the market (whether the domestic market or the foreign) at low prices if its labor is productive. Such is the familiar situation as to our great agricultural staples. The money incomes of those who grow wheat in the United States—whether the earnings of the independent farmers or the wages of

the laborers whom they hire—are larger than the incomes and wages of wheat-growers in most other countries. But the wheat can none the less be sold at a low price in the United States, and can be exported from the United States, because our labor is efficient in producing it. Why the labor is efficient is no part of the present inquiry. One cause clearly is the abundance of fertile land; a cause no less important is the wide-spread intelligent use of good agricultural machines. These very agricultural machines—to mention another article—are largely exported from the United States, tho the wages of the workmen who fashion them are high; because the methods of making them have been highly perfected, and the labor of the workmen is correspondingly efficient. To turn to another case, the earnings of the negroes who grow cotton in our Southern States, low as they may be when measured by ordinary American standards, are higher than those of the fellaheen in Egypt or the ryot in India. Yet American cotton can be sold as cheap as that of Egypt or India. The soil and climate make the Southern negro's labor effective, and doubtless in some degree a better organization and direction of his labor contribute also to make it effective.

All this is but a restatement of the principle of comparative costs,—that a country will export those things in which it has a comparative advantage. The exposition of that principle would be much simpler and more effective if it were made clear (the common form of statement fails to make it so) that those things in which a country has a “comparative advantage” are those which are likely to be low in price. International trade, like all trade, though fundamentally a matter of barter, is proximately a matter of price. A country sells abroad those things which it can produce at low prices at home. Ordinarily, those things are produced at low prices at home in which its labor is efficient.

Let us proceed to the next stage in the analysis: what will be the range of prices for those commodities which do not enter into the sphere of international trade,—those which are not exported or imported, but are bought and sold solely within the country? The quantity of such commodities is very great, and in all countries probably much exceeds that of commodities having a world range of prices. Many things are too bulky to be transported over any considerable distance,—as stone, bricks, timber. Many are perishable, as milk, butter, eggs, fruits, vegetables. No doubt modern improvements in the transportation of bulky goods and in the preservation of those that are perishable tend to enlarge the sphere of foreign trade. But such things are still sold mainly in their own region and at the prices of their own region. House-room and shelter—a most important article of consumption and purchase—cannot be transported at all, and so may vary widely in price in different countries. Some of the articles used in building houses—boards and laths, doors and windows, locks and hinges—may, indeed, be sent to distant regions. But even these are much affected by the customs and fashions of the several countries, and are usually made and sold on the spot or near it. A multitude of articles which might conceivably be brought from foreign countries are, in fact, made chiefly at home, because of the persistent sway of habit and tradition. Such are clothing and boots, tools and machines, wagons and harness. The reader's imagination will easily enlarge the list. The prices of all these things are determined under domestic conditions. They do not enter into international trade, and have no world level of prices.

Most persons would say that the prices of such commodities—it will be convenient to speak of them as domestic commodities—will be high in countries where money incomes are high and low where money incomes are low.

But this by no means follows. The range of domestic prices in a country, as compared with the range of prices of the same things in other countries, depends on the efficiency of labor in producing those commodities that do not enter into international trade.

Looking at the United States as our example, we find some things higher in price than in European countries, some things lower. We know, of course, that the exported articles—wheat, corn, flour, meats, cotton—are as cheap, even somewhat cheaper. But how about domestic commodities? Some are dearer, some are cheaper. Comparison is often difficult, because the qualities of things vary; but every-day observation suffices to establish significant differences. Wheat and flour are cheaper, yet bread from the bake-shop is dearer. Most fruits are as cheap or cheaper in the United States, especially when they have been transported some distance. In the immediate region of fruit-growing, fruits are often cheaper in Europe. Eggs are dearer in the United States. Milk and butter are usually dearer also. Bituminous coal is, in most parts of the United States, as cheap or cheaper. Anthracite coal is dear; but comparison with a corresponding article in European countries is not feasible. The simpler kinds of cotton clothing are cheaper. Boots and shoes are as cheap, probably cheaper. Woollen clothing is dearer. Here the effect of the duties on wool must be reckoned with; but ready-made woollen clothing is not so comparatively high in price as that made to order. Household furniture is cheaper; hardware and kitchen utensils are probably also cheaper when due allowance is made for quality. All things that involve personal service—cab fares, hotel charges, servants' wages—are markedly higher in price.

An interesting case, and one that serves to bring out both the difficulties of comparison and the working of the underlying forces, is that of house-room. The amount

that is actually paid out for house rent is, scale for scale in the social stratification, higher in the United States. But in most cases more is got for the money. The space is ampler, the lighting better, the appurtenances more convenient. Persons of the well-to-do class who spend a season in Europe will commonly pay less for house rent than they would expect to pay in the United States, but they are commonly content with less agreeable and convenient accommodations. A significant difference is observable between houses made chiefly of wood and houses built of brick and stone. Masonry work is dearer in the United States: wood work is as cheap or cheaper. Houses of brick or stone cost more to build than in Europe. If built of wood, they cost less. The explanation is that machinery can be applied to manipulating wood more easily than to brick or stone. Given the same efficiency of labor, the same output per day per man, and it is evident that, if you pay higher wages, you must charge higher prices. Such is the case, in the main, with brick and masonry work in the United States as compared with Europe. Brickmaking and bricklaying, stone-cutting and masonry, are done chiefly by manual and artisan labor, tho in brickmaking and in stone-cutting there is probably, in the United States, somewhat greater use of power and machinery. Wages being higher, and the efficiency of labor no greater, prices must be higher. Wood working, on the other hand, from the rough-sawn timber to the last moulding on the door or windows, is done in the United States with a great use of machinery; and, what is most significant, with a *greater* use of machinery and labor-saving devices than in any other country. Labor is thus made more efficient, and, though more highly paid, its product is not necessarily sold at a higher price. Given a sufficient advantage in efficiency, and the product will even be cheaper. If the work on your wooden house is all

done on the spot by carpenters, it will be dearer in the United States; but, if the carpenters simply put together in short order the machine-made pieces from the saw-mill and factory, it will be cheaper in the United States. The latter is the way in which the great majority of houses are built in the United States for persons of small means or moderate means; and such houses are as cheap as in Europe or cheaper, and the house rent for them is, quality and convenience considered, as low or lower.

This explanation of the range of house rents applies, strictly speaking, only to the selling price, or capital value, of the building and improvements. The rental is compounded of a return on this investment and of premium for the advantage of the site, namely, economic rent proper. The first of these items, interest on capital, is affected by causes very different from those that govern prices and wages. The rate of interest may be high where money wages are low, and low where wages are high. In fact, however, the variations in the rate of interest among civilized countries are not so great that we have here an important qualification of our conclusion as to the causes acting on the price of house-room. Differences in the cost of building will affect this part of the rental much more than differences in the rate of interest. As to economic rent, the case is simpler: this return may be expected to vary *pari passu* with money incomes. To apply the familiar theorem, rent is here the result of price, and not among the causes of price. Where the general range of wages and of income is high, the amount that will be paid for an advantageous or indispensable site will be correspondingly high. Hence we are prepared to learn that the rents of tenements in New York City are high. The investment in them is heavy. Their brick work is done by highly paid artisans, with little use of labor-saving machinery. A crowded population, with a high range of money incomes, causes

economic rent to rise to portentous heights. On the other hand, in smaller cities and in the suburbs of most larger cities, modest wooden houses for artisans are cheap. Economic rent enters little, and the cost of building is comparatively low.

Similar reasoning can be applied to the rental of business structures. The steel-frame office building in the United States probably costs less per unit of available space than similar buildings in Europe. The less ambitious brick or stone business structure probably costs more. The total rental is a compound of interest and economic rent, the latter exercising a preponderant influence on those sites where there is demand for the enormous amount of floor space provided in the huge office building.

Ordinary pick-and-shovel work costs more in the United States: sewer-digging, street-making, the grading of a railway. Wages are higher, and, man for man, no more is accomplished, or little more. It is, indeed, often said that the efficiency of such labor is greater in the countries of higher wages: the laborer, getting more food, can do more work. There is doubtless truth in this, in comparing the laborers of starvation countries, like British India, with those of countries where life is less cheap. But I have always been doubtful as to the sweeping application of this sort of reasoning. The rice-fed Chinaman or Japanese seems to do as much in a day as the beefy Englishman; the frugal Italian as much as the extravagant Irishman. Hence we may expect the product of ordinary manual labor to cost more (in money) in a country like the United States. No doubt much work that seems to be solely of this kind is affected by the degree and extent to which machinery and labor-saving devices are used. The familiar apparatus of sewer-construction in the United States is vastly superior to anything of the sort in common use on the continent of Europe. The same is true of

the railway contractor's outfit. So far as the American engineer and contractor can secure by such means greater efficiency of labor, the high money wages do not bring high expenses and high prices.

Railway freight rates are, on the whole, lower in the United States.¹ That they should be lower or as low, notwithstanding the higher wages of all railway employees, is clear proof that the efficiency of railway operations in the United States is greater than in Europe. The lower rates for freight and the greater extension of facilities for long distance traffic go far to explain the comparatively low prices of many commodities,—fruits, coal, even bread-stuffs and meats. One great cause of the general efficiency of labor in the United States and of the wide diffusion of material prosperity has been the extraordinary development of the geographical division of labor; and for this the widely ramifying railway net, and the extent and cheapness of railway service, have been indispensable. Street railway fares, to instance another curious case, are as low or lower in the United States. Even at the lower fares, they commonly yield large profits. The efficiency of labor must be very much greater.

Retail prices—I mean prices at retail compared to prices at wholesale—present a mixed case. If the operations of the retail dealers in the United States are conducted in the same way as in Europe, the advance of retail prices

¹In Meers. Hoff and Schwabach's *Nordamerikanische Eisenbahnen* (Berlin, 1906, chap. viii.) a careful comparison is made between the general range of railway rates in Prussia and in the United States. The conclusion is that, when due allowance is made for the different position of express and post-office business, for passenger fares, for capital investment, rates are in reality a trifle ($\frac{1}{2}$ pfennig) lower in Prussia. The mode of calculation made by these writers seems to me open to criticism, more especially in regard to the allowance for greater capital investment in Prussia. But, even admitting the accuracy of the calculation, the result is that the money rates charged for railway service are virtually the same in the two countries; yet the money wages of the workmen are twice as high in the United States.

So far as passenger rates are concerned, comparison is not easy, since the bulk of the passengers in Europe travel third class, with accommodations less convenient than those of the average American passenger; i.e., with a different quality of service.

over wholesale must be greater. Otherwise the earnings of the retail dealer will not be on the same liberal scale as the wages and earnings of the rest of the community. But if the retail dealer's work is done, not in the same way, but in a more effective way than in Europe, he can reap sufficiently high gains with no larger margin of profit. Both situations seem to exist. The large department store in the United States is probably conducted with greater efficiency and with no greater advance of retail over wholesale prices than in European countries, tho the recent rapid growth of this sort of shop-keeping in Europe makes the difference less certain than it would have been ten or twenty years ago. On the other hand, a great deal of retailing—probably the greater part of the sum total of this sort of work—is still done on a small or modest scale. The grocer, butcher, apothecary, must usually be near his customer. This means that the operations are scattered and are conducted on no large scale. In such case the advance of retail prices over wholesale—the retailer's "profit"—is greater in the United States. Hence it may happen that an article which is exported from the United States to Europe, and whose wholesale price is necessarily lower in the United States, may yet be dearer here to the consumer. Expense of transporting the great staples across the ocean has been reduced to a very narrow margin, and the slight difference caused by this in wholesale prices may be more than balanced by the greater advance of retailer's profits in the country of higher money incomes. Butcher's meat may cost the consumer more in the United States, even though dressed beef be sent by the shipload across the Atlantic.¹

¹ It may be that another cause enters to explain the fact that the retail prices of meat products exported from the United States are sometimes higher here than in the countries to which they go,—a phenomenon which has doubtless puzzled many observers. The Eastern seaboard regions, and especially New England, are supplied with meat chiefly by the great packing concerns whose headquarters are

Persons of the well-to-do classes always find the expenses of living incomparably higher in the United States than in Europe; and, to their mind, there is no question that prices here are higher, and higher in proportion to the higher range of money incomes. The explanation is partly that much of their expenditure is for personal services; partly that another large slice of it is for those articles, imported and other, which are really high in price; partly that a higher scale of comfort and luxury has been established by prevalent prosperity. A good part of the income of the well-to-do is spent for services,—for domestics, for such things as cabs and hotels. Where the range of wages is high, these things are expensive. Wages for domestic service are particularly high, because the spirit of democracy makes the occupation distasteful. Americans who resort to Europe, on the other hand, always find living cheap; for domestic service and all that hangs thereby can be obtained at low prices. Again, the expenditure of prosperous Americans at home is directed in large degree to the less hackneyed and less common articles,—to the hand-made things rather than the machine-made things. The hand-made things are dear in a country where money wages are high. Clothing made to order is dear, but ready-made clothing is by no means dear in the same degree. Factory-made furniture is cheap: custom-made furniture is extremely dear. Cab fares are high: street railway fares are low. Imported articles of course would be no higher in price than abroad, or very little higher, were they admitted duty free. Being subjected to

in Chicago. These have a more or less compact pooling or price-fixing arrangement, and very likely charge the Eastern consumer something in the nature of a monopoly price. When they export, say to England, they cannot exercise such a monopoly power, and their prices, even at wholesale, may be lower. Whether the facts are in accord with this explanation, and whether we have here another reason for the peculiar difference of English and American prices of meat, I am unable to say. The subject is an appropriate one for investigation by some of our public bureaus of statistics.

heavy duties, they also are expensive. It is probable that the most effective part of our protective system is now directed against the articles made in larger proportion by hand, with the tool, and in less proportion by power, with machinery. These are the things most likely to be imported into the United States, and most enhanced in price by the protective duties. These are often, though by no means always, the commodities bought by the well-to-do; and thus there is ground for saying that the social effects of the protective system here are very much less objectionable than in countries that levy effective duties on the staples of life.

In sum, it can be said that the United States, though a country of high wages, is not a country of high prices for the great mass of the community. It is so in large degree for the rich and well-to-do. The artisans and workingmen and farmers have, indeed, a high scale of living, for they have plenty to spend; but the domestic articles they buy are, on the whole, not dear. They are not dear, because the efficiency of labor in making them is, on the whole, no less than the efficiency of labor in making the exported articles. Imported articles which are duty free, like tea and coffee, are as cheap (barring cost of carriage) as in foreign countries; and here also the American gets the full benefit of his higher money wages. So far as the protected articles are concerned, his advantage is simply thrown away.

What has been said of the United States, the typical country of high money wages, applies, *mutatis mutandis*, to countries of low wages. Domestic prices in a country of low money wages may or may not be low. Such a country is usually—though not necessarily—one with an all-around inefficiency of labor. Those articles as to which its labor is least inefficient, and which are transportable or for other reasons salable abroad, will be exported. Though

they may be turned out by inefficient labor, they can yet be sold at the international price because the expenses of production—money wages—are low. Domestic commodities—namely, such as are not exported or imported—may be comparatively low or high in price, according as labor in producing them is effective or ineffective. The wages of servants and other like expenses of the well-to-do are sure to be low.

Our next inquiry is, What causes high money wages? The answer is not hard to find. Those countries have high money wages whose labor is efficient in producing exported commodities, and whose exported commodities command a good price in the world's markets. The general range of money incomes depends fundamentally on the conditions of international trade, and on those conditions only. The range of domestic prices then follows: it is high so far as the efficiency of labor in domestic commodities is small, low so far as the efficiency of labor in domestic commodities is great.

The situation is simplest in the case—difficult to find in the real world, but instructive for illustration of the principle—of a country having a monopoly of a given article of export or set of exported articles. By monopoly, of course, is meant not that the producers within the country fail to compete effectively among themselves, but that the producers of no other country compete with them. The price of such exported articles would depend, in the manner with which the reader may be supposed familiar, on the equation of international demand. The more the consumers in other countries care for them, the higher will their prices be pushed. The less the labor with which these articles are produced at home, the higher will be the money wages resulting from these high prices. The higher money wages in the exporting industries will

set the standard for money wages in the country at large; and the general high wages may or may not be accompanied, as already explained, by high domestic prices.

Where a country exports in competition with other countries,—the well-nigh universal case,—the same forces are at work. The prices at which the exports are sold depend on the world demand for the commodity. In that world demand, or, to speak more carefully, interplay of demand, the extent to which the consumers in the several countries care for the articles imported into them determines which countries shall sell their exports on advantageous terms. Those countries whose exports are in most urgent demand will have the greatest possibility of high money incomes. Whether they will have high incomes in fact, depends on the labor cost of their exports. The wheat which is exported both by the United States and by Russia sells at the same price; but that price means large money returns in the country of machinery, efficient labor, and cheap internal transportation, and low money returns in the country which lacks these advantages. In the language of Mill,¹ "What a country's imports cost to her is a function of two variables: the quantity of her own commodities which she gives for them, and the cost of those commodities. Of these, the last alone depends on the efficiency of her labour: the first depends on the law of international values; that is, on the intensity and extensibility of the foreign demand for her commodities, compared with her demand for foreign commodities."

Where a country produces and exports specie,—gold, let us say,—the case may seem to be different; yet a little consideration will show that the forces at work are the same as in countries producing other articles of export. A gold mining country may or may not have a high level of domestic prices. Gold is indeed a commodity which always

¹ Mill, *Principles*, Book III., chap. xviii., § 9.

is readily taken by foreign countries. The demand for it is sometimes said to be limitless; more carefully stated, it is constant. All the gold produced will be taken, and will be distributed the world over among virtually all the trading countries, at rates of payment which will be very slightly modified by any annual or decennial increase in the quantity sent out from the mining countries. If now the gold is produced, and produced freely, with little labor,—if it is cheap in that essential sense,—the mining country will have high money incomes. Such was the case in California and Australia during the first days of the gold discoveries. Prices of all things were high in those days; for in commodities at large labor was by no means efficient. In a country where gold, though mined, is not produced under advantageous conditions,—where the mines are poor or mining methods at a low stage,—money wages will not be high; and the gold will not be mined at all unless it yields as large money incomes as other possible articles of export.

In the case of a gold mining country we may note a qualification which indeed should be borne in mind for all countries and for all commodities: it is to be assumed that the exporting industry does not partake of the character of a monopoly within the country. In the placer mining days of California and Australia any laborer with a pan and a stock of provisions could join in the hunt for gold, and high money wages were a matter of course. When more elaborate mining set in, high wages still continued, so long as the mining capitalists competed among each other for laborers. But if some of the mines were highly productive and others much less so, the efficiency of labor at the margin of mining would fix the range of money wages. There might be advantageous production and heavy exportation of specie, without a high range of wages, if the exports came predominantly from the better

mines. And if the mines were all owned and operated by one person or organization, the greatest richness and productiveness need not result in high wages. All the treasures of Potosi, however little labor they cost the wretched native, never could bring him high returns, even in money. And similarly, if all the exporting industries of the United States were under such control as are the production and refining of petroleum, however great the productiveness of labor and however strong the foreign demand for the articles, the general range of money wages would not necessarily be high, and certainly would be less high than under conditions of unrestrained competition.¹

There is an important sense in which it is true that a country whose position in international trade is advantageous has not only high money incomes, but high prices as well. In the preceding, domestic prices have been said to be high or low, if the prices of given commodities are higher or lower than the prices of the same commodities in other countries. Thus the price of a wagon may be spoken of as high or low in the United States if it is higher or lower than the price of the same sort of wagon in Europe.

¹ The foundation for all such discussion as this was laid by Ricardo, whose genius nowhere shone so brilliantly as in his illumination of the theory of foreign trade. But Ricardo, so far as I know, referred only to varying general prices in different countries. Senior seems first to have laid it down explicitly that the range of money incomes depends on the conditions of foreign trade (*Lectures on the Cost of Obtaining Money*, 1830, pp. 13-16). Mill spoke sometimes of high prices, sometimes of high incomes, as the result of favorable conditions of foreign trade, and did not pause in his exposition to consider the relation of money incomes and domestic prices. Cairnes followed Senior, though using different language, when he said that a country was interested in having "cheap gold"; by which he clearly meant, though he did not say it in so many words, high money incomes,—i.e., much gold for little labor. Cairnes also noted that "cheap gold" did not necessarily mean high prices of domestic commodities. See his *Leading Principles*, Part III. chap. v., § 1. In Bastable's *Theory of International Trade*, 4th edition, p. 71, there is a brief paragraph indicating that this able thinker had reflected on the complex relations of money incomes and prices. Professor Edgeworth's articles on International Trade in the *Economic Journal*, vol. iv., take up quite different aspects of the theory. I have found nothing in the writings of French or German economists to show that such topics had engaged their attention at all.

Similarly, railway and street railway fares and house rents may be reckoned low if they cost less money than similar things in Europe. But we may compare wagons and fares and rents, not with European rates, but with the prices of the same things at a different time and under different conditions in the United States. So considered, it is obvious that they are likely to vary with wages and money incomes. They will probably rise as money wages rise, and fall as money wages fall.

If we suppose, for example, that the conditions of international demand change to the advantage of a given country, that its exports sell on better terms, and that money incomes in the exporting industries rise, we may expect that the same rise in money incomes will spread to other industries. This will necessitate in those other industries a rise in prices. In the exporting industries the higher wages will be the result of higher prices; but in other industries higher prices will be as much a result as a cause of higher wages. The process of adjustment and enhancement will probably be slow and uneven, and will take time. In an immobile country, where custom and tradition have a strong hold on prices and wages, it may take a decade or a generation. Even in a mobile modern country, it will take years. But domestic prices will be higher in the end than they would otherwise have been. This, no doubt, is the sense which the older economists really had in mind when they set forth that a country having favorable terms of international trade would possess high prices. But their mode of stating the case might be easily understood to mean that domestic prices in such a country were higher than prices of the same things in other countries, which is a different proposition, and, as we have seen, a doubtful one.

Further, it is not certain that under the conditions thus assumed domestic prices will rise at all. *Pari passu* with

the rise of money wages due to the country's better position in international trade, there may be improvements in the arts or the opening of new resources, which will reduce domestic prices or prevent them from rising. Given this force in operation on domestic prices at the same time with a turn in international trade causing money incomes to rise, and the parallel movement of wages and prices will be broken. Such was the general trend—rising wages and falling prices—through the last thirty years of the nineteenth century; it may prove to be the trend in the present century.

The recent experience of the United States serves to illustrate the principle just stated, precisely as the general range of its domestic prices has served to illustrate the relation between international trade and domestic prices. The striking phenomenon in the international trade of the United States during the last thirty years has been the insistent demand of foreign countries for our exports; and at no time has this been more striking than during the six or eight years just past. The main items in our exports are still the great agricultural staples: cotton, wheat and flour, other grains, meat and meat products. These are necessities, or articles of enjoyment so habitually in use that they are very reluctantly dispensed with. The increase of population and the slow steady rise in the standard of comfort the world over, and particularly in European countries, causes an unrelaxing growth in the demand for them,—a demand checkered indeed by the accidents of seasons and crops, and by the oscillations of industrial activity, but on the whole advancing without relaxation. So far as our imports are concerned, some are in similar strong demand on our part: coffee, sugar, tea, are insistently called for. On the other hand, the imports of manufactures are mainly in a different case. They are articles easily dispensed with, more quickly dropped

when their prices are high or times are hard, less easily stimulated to further use when their prices are lowered. All this brings it about that our exports are more easily and certainly disposed of abroad than imports are disposed of here. This means that specie tends, on the whole, to flow to this country (or, what comes to the same thing, the domestic output of specie retained within its borders), and that money wages and domestic prices tend to be high. That is, money wages tend to be high as compared with foreign countries, and domestic prices tend to be high as compared with what they otherwise would have been.

The force which has brought about these tendencies has not acted with uniform pressure. There has been a succession of pushes. Recurrently, periods have come when large crops of cereals in the United States have coincided with short crops in Europe or when the American cotton crop has declined or failed to grow. Then the insistent European demand has made itself felt with sudden force. Exports have swollen and have exceeded the imports; specie has flowed in; a period of excitement, rising prices and speculation, has begun. Such has been the nature of the very latest upward movement. The revival of activity after the depression of 1893-97 was due to the slowly gathering demand for the staple exports; and the maintenance of activity has been due fundamentally to the same increasing demand.¹ Hence imports of specie, retention of the domestic specie product, rising wages, rising prices. The rise in money incomes has been well-nigh universal. The rise in domestic prices has been less so, because offset here and there by improvements in the arts, and by increased efficiency in producing one commo-

¹ See the excellent analysis of the recent economic history of the United States by Mr. A. D. Noyes, in this *Journal*, vol. xix., February, 1905. Compare also the article by Professor A. P. Andrew in the last issue of this *Journal*, May, 1905.

dity or another. All the demands of trade unions and all the scales of higher wages have been immensely promoted by these conditions, if, indeed, they have not been mainly caused by them. Labor unions, strikes, trade agreements, have been the mechanism by which the fundamental cause has worked out its effect. That mechanism, no doubt, has important independent effects of its own; but it is not to be supposed the sole force or the strongest force in operation.

The favorable position which the United States thus has in international trade has reacted on the effects of the protective system. That system has checked the demand for imports, and made it more difficult for foreign countries to provide the wherewithal for discharging their obligations on account of the exports which they want so insistently. The result has been that money incomes in the United States, which would be high in any case, have been pushed even higher; and thus domestic prices also have been held higher. On the other hand, the prices of imported goods have been depressed,—either actually lowered or kept lower than they would have been,—and the people of the United States have gained as consumers of imported goods. So far as they have been successful in stimulating the domestic production of goods that would otherwise have been imported,—that is, so far as the protective system has achieved its avowed effect,—this gain has been simply thrown away, and a loss has been substituted for it. But, so far as importation has continued, the gain has been really secured. Many imports come in over the tariff barrier. These of course are raised in price over the foreign price by the extent of the duties; but the treasury gains what the consumers pay, and other taxes are presumably dispensed with, and the foreign price itself is lower than it would otherwise have been. As to duty-free imports, there is obviously a clear gain. They are

lower in price, and the money incomes for buying them are higher. Whether the loss in buying the home-made protected commodities outweighs the gain in buying the commodities that continue to be imported is quite impossible of calculation. The ardent protectionist might find in this sort of reasoning a tenable ground for supporting his policy in a country situated as the United States has been; but few protectionists follow the strict logic of economics far enough to perceive the advantage which they might thus proclaim.

A last word may be said as to the relation of all this reasoning to the modern development of the theory of value, and more especially to the question how far value depends at bottom on utility, how far on sacrifice. The Ricardian assumption—tacitly followed in the preceding pages—was that in domestic exchanges values and prices depended on sacrifice, on labor. Those commodities, it was supposed, whose labor cost was low would be low in price, and so would tend to be exported. But do value and price depend on labor cost? Are there not, to use Cairnes's convenient phrase, non-competing groups? And is not utility the permanent regulator of value? If so, what of the reasoning which assumes that efficiency and labor cost determine which commodities shall be cheap in money, and so shall be exported from a country?

Some allowance for this turn in the reasoning was made by the older economists. Exceptionally low wages in any particular industry, it was pointed out, had the same effect in international trade as low labor cost. Either served to give a comparative advantage, and to cause a commodity to take its place in the list of exports. Slave-grown articles were commonly used to illustrate this exception. But an exception it was still thought to be. In the main, labor cost determined value within a country,

and so determined what goods should be exported. But, if there be no free movement of labor from group to group, and no correlation of capitalists' expenses to labor cost, will not the whole theory of international trade need to be overhauled?

The answer to this question is twofold. In the first place, there probably is more competition among laborers than the bare assumption of non-competing groups admits. Briefly to state my own view on this crucial matter, I do not believe that competition among workers is so free as to bring about an equalization of reward, and to adjust wages to sacrifice. There are effective obstacles to free movement. There are, in so far, non-competing groups; and value is proximately determined by utility, not sacrifice. But the barriers between groups are not impassable. The higher the differences in reward, the greater the number who get over the barriers and increase the supply in the favorably situated groups. Hence labor cost, sacrifice, are always in the background, so to speak, and prevent the sway of utility over value from being unqualified. The greater the deviation of value from equivalence to sacrifice, the less is it likely to persist. In the long run, competition between workers exercises not a dominating, but a correcting influence.

However this may be, there is a second reason why the theory of international trade does not need on this score serious modification. Goods are rarely made, in civilized countries, by workers of one grade only. The day laborer does not make one thing, the mechanic another, the engineer a third. They join in the combined labor applied to all the various commodities. Now, if the relations of the different grades to each other are the same in different countries, and if the same combinations of labor are used for any one article, the conditions of competition between the countries are precisely the same as if within

each country labor cost alone determined value. If the earnings of engineers are twice as high as those of mechanics in all the countries, and the earnings of mechanics twice as high as those of day laborers, and if, moreover, the same combination of the labor of all three is used throughout in making the same commodity, then those things will be cheap which are produced in a given country with comparatively little labor, and those things will be dear which are produced with comparatively much. The former will tend to be exported, and the latter will tend to be imported.

It is not to be pretended that there is, among different countries, such absolute identity in the relations of the different grades of labor as has here been assumed, or in the way in which the grades are combined for the operations of production. Tho the phenomena of social stratification are, on the whole, similar in the civilized countries, new and old, there may be important differences. A particular group of workmen may be in higher demand in one country than in another. Their wages may be particularly high in the first country. If so, though their labor may be efficient, its product will be comparatively dear in price. On the other hand, a particular kind of labor may be so abundant as to be cheap in one country. Its labor may be paid for on a scale low as compared with the general scale in that country; and then the effect is precisely the same on international trade as if such labor were comparatively efficient.

I suspect that a situation of the kind last mentioned has appeared in the United States in the last twenty years,—a situation in which a particular kind of labor has been paid, if not at decreasing rates, yet at rates that have failed to advance *pari passu* with the general rise in money incomes. Broadly speaking, the pay of unskilled manual labor has relatively declined. Most money incomes have advanced in the United States during the last thirty years, and the

incomes of skilled mechanics have advanced very considerably. But the wages of ordinary day labor, and of such factory labor as is virtually unskilled, seem to have remained stationary, and sometimes seem even to have fallen. The explanation undoubtedly is that immigration on a huge scale has steadily maintained the supply of such labor. The pressure for employment on the part of the newly arrived has kept down the pay for the simple sort of work they can turn to.

The consequence is that industries using such labor in large degree are in a relatively better situation than they were before, and hold their own against foreign competition more easily than before. In general, it is to be expected in the United States that those industries which use highly skilled labor—namely, those which use machinery calling for skilled labor—will best hold their own; for it is here that American labor has proved to have a comparative advantage. But where unskilled labor is cheap, not responding readily to the general conditions which make wages high,—where it is relatively cheaper than in competing foreign countries,—there the disadvantage which the employer finds in using it *pro tanto* disappears. One of the striking changes in the economic development of the United States during the last generation has been the growth of manufactures that need such labor, the steady cheapening of their products, and their lessening dependence on support from the protective tariff. Such are the manufactures of pottery in its cheaper grades, of silk goods, of textiles in general. The cheapening of bituminous coal and of coke seems to be part of the same phenomenon. The boasted advance of manufacturing industries is thus due in some degree to a change, not entirely welcome, in social conditions. No doubt other causes also have contributed to it: the discovery and utilization of natural resources hitherto unknown or neglected,

improvements in methods and machinery more rapid than the improvements in foreign countries, and protective duties pushed up to the highest limit. But the comparative degradation of the lowest stratum in the social structure has been a contributing factor. Thus, to take an example, the silk manufacture has been stimulated to extraordinary growth by extremely high protective duties. But it has also found at its command a vast supply of cheap, unskilled labor, easily employed in many of its branches; and this circumstance has enabled it to take advantage of the protective system with ease and rapidity. What would happen if the protective wall were removed, and if this second source of advantage alone were at its disposal, who can say?

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THE DISTRIBUTION OF IMMIGRANTS IN THE UNITED STATES.

WITHIN the last fifteen years the statement that recent immigrants, and above all illiterate immigrants, cling to the great cities, especially those of the Atlantic seaboard, and swarm in the slum districts of those cities, has been made and repeated until it has become accepted. The emphasis laid upon this aspect of the immigration question has increased rapidly, and is still increasing. Some writers believe it is the most serious phase of our immigration problem, many that it is so serious as to demand the attention and even the intervention of the Federal government or of the State governments.

The object of this paper is to examine the evidence on which this opinion has been based. I begin with a summary of important statements of it which have fallen under my eye. The quotations have been arranged in chronological order.

The persons of foreign birth in the United States seem to seek the large cities.¹

The proportion of foreign born in the principal cities is very nearly twice as great as the proportion of foreign born in the country at large. If we go a step further, and contrast the proportions of foreign born in the principal cities and in the remainder of the country outside of these 124 cities, it is seen that the proportions are very nearly as 3 to 1. . . . It appears then from these figures that, taken as a whole, the element of foreign birth seeks the cities with far greater avidity than does the element of native birth.²

Illiterates largely stagnate near the Atlantic seacoast, while the more educated nations move on to build up the new States. . . .

¹ Mayo-Smith, *Immigration and Emigration*, p. 71 (1890).

² Eleventh Census, *Population*, Part I., p. lxxxix (1895).

The illiterate races, such as the Hungarians, Galicians, and Italians, remain to lower the standard of the already crowded Atlantic territory.¹

The need is to devise some system by which undesirable immigrants shall be kept out entirely, while desirable immigrants are properly distributed throughout the country.²

The illiterate immigrants congregated chiefly in the slums of our great cities.³

Under present conditions, immigrants are becoming concentrated in the East, for the most part in the large cities, and especially in and about the city of New York. This congestion of aliens is very nearly, if not altogether, the most menacing feature of the present immigration.⁴

The problem of immigration with us is essentially one of distribution. The demand for laborers is great outside of the cities, but the gregarious Italian prefers to increase our menacing urban congestion instead of going to the country.⁵

Since we cannot depend on the immigrants to scatter, means must be taken to diffuse them throughout the country and to localize them away from the great cities.⁶

Instead of going to those sections where there is a sore need for farm labor, they [*sc.*, the immigrants] congregate in the larger cities, mostly along the Atlantic seaboard, where they constitute a dangerous and unwholesome element of our population.⁷

Landing in the large cities, they [*sc.*, the average emigrants of to-day] seldom move on to the greater air spaces of the country.⁸

As much as possible should be done to distribute the immigrants upon the land, and keep them away from the congested tenement-house districts of the great cities.⁹

Some pressure must be brought to bear upon the immigrants to secure distribution, because under the present system they do not voluntarily distribute themselves.¹⁰

¹ Fifty-fourth Congress, First Session, Senate Report No. 290, pp. 8, 9 (1896).

² President's Message (1903).

³ Senator Lodge in *Century Magazine*, vol. lxxvii. p. 468 (1904).

⁴ *The Outlook*, vol. lxxvi. p. 489 (1904).

⁵ G. C. Speransa in *The Outlook*, vol. lxxvi. p. 938 (1904).

⁶ E. Norton in *Annals of American Academy*, vol. xxiv. p. 161 (1904).

⁷ F. P. Sargent in *Annals of American Academy*, vol. xxiv. p. 153 (1904).

⁸ J. D. Whelpley in *Fortnightly*, vol. lxxxiii. p. 317 (1905).

⁹ President's Message (1905).

¹⁰ Prescott F. Hall, *Immigration*, p. 300 (1905).

This opinion bids fair before the present article is printed to give rise to legislation. The bill to regulate immigration, which passed the Senate May 24, 1906, contained a new section, of which the following is the material part:—

§ SECT. 39. That the Commissioner-General of Immigration, under the direction of the Secretary of Commerce and Labor, be, and he is hereby, authorized and directed to establish and maintain at each of the immigrant stations within the United States a bureau of information. Such bureau shall be properly officered, and shall, under such rules and regulations as the Commissioner-General of Immigration may from time to time establish, collect and furnish to all incoming aliens, who may ask for the same, data as to the resources, products, and manufactures of each State, Territory, and District of the United States; the prices of land and the character of the soils therein; the routes of travel thereto; the cost of transportation thereto; the opportunities for employment in the various skilled and unskilled occupations in each of said States, Territories, and Districts; the rates of wages paid for such labor, respectively, in each of said States, Territories, and Districts; the cost of living therein, and all other information that in the judgment of said Commissioner-General of Immigration might tend to enlighten the alien immigrants coming to such immigrant stations as to the inducements to settlement in each of the various States, Territories, and Districts of the United States: Provided, That the Bureau provided for in this section may, at the discretion of the Commissioner-General of Immigration, furnish such other information to alien immigrants as may be useful and proper.

From the foregoing quotations the following statements of the prevalent opinion, and, so far as I have noticed, the only opinion to find frequent expression in the public prints, may be framed.

I. The foreign-born population of the United States has a stronger tendency towards cities than the native population.

II. This tendency is much stronger among recent immigrants than among those who entered the country a generation ago.

III. It is much stronger among illiterate immigrants than it is among those who are able to write some language.

IV. This tendency is disadvantageous to the immigrants and an economic and social danger to the United States.

V. The evil results of this tendency are so great as to necessitate the creation of agencies, Federal, State, or private, to counteract or correct it.

I. The evidence in support of the first proposition is stated clearly and effectively in the Report of the Industrial Commission, under the heading "Tendency of Foreign Born towards Cities."¹ The figures for 1890 there presented show that in the 124 cities of the United States, each of which had at least 25,000 inhabitants, the foreign born were 29.2 per cent., and in the rest of the country only 10.6 per cent. of the population. The figures for 1900, since published, show that in the 160 cities of like size the foreign born were 26.0 per cent., and in the rest of the country only 9.4 per cent. of the population. These figures seem to show beyond question that in cities the proportion of foreign born is almost thrice that in the rest of the country, and consequently to demonstrate that the immigrant has a tendency towards cities stronger than that of the native.

To the figures in this form, however, it may be objected that they include the South as well as the North, and the South is mainly rural and also comparatively unattractive to the immigrant. A fairer measure of the difference between the tendencies towards cities on the part of the immigrant and the native may be had by excluding from the figures those for the Southern States and confining the comparison to the North and West.

¹ Vol. xv. p. 78 (1901).

The following table shows the results of a comparison in this form ¹—

SIZE OF PLACE OF RESIDENCE.	PER CENT. OF POPULATION FOREIGN BORN.			
	North Atlantic Division.	North Central Division.	Western Division.	North and West.
Total	22.6	15.8	20.7	19.0
All cities	27.8	21.2	24.6	25.1
Cities of 100,000+	32.1	27.2	28.0	30.1
Cities of 25,000-100,000	25.8	19.1	26.1	23.7
Cities of 8,000-25,000	23.6	16.5	22.3	20.4
Cities of 4,000-8,000	19.6	13.2	19.8	16.6
Cities of 2,500-4,000	18.3	14.0	18.8	16.4
Country districts	11.5	12.4	18.0	12.7

These figures show that the smallest proportion of foreign born is found in the country districts and the largest proportion in the largest cities, and that, as a rule, with only one exception out of fifteen cases, the smaller the population of a place, the smaller the proportion of foreign born in its population. They show, also, that the proportion of foreign born in the population of the large cities of the United States is about two and one-half times as great as that in the country districts. These figures seem to confirm and establish the conclusion that the foreign born have a stronger tendency towards cities than the native population.

But to draw such a conclusion at once, as has usually been done, is to overlook an important difference between the points of arrival of our native and our foreign-born population. The native arriving by birth usually begins his life in the country, the foreign born arriving by immigration usually begins his American life in a city, and much or all of the difference between the distribution of native and foreign born might be due to this fact, and not

¹ For the figures from which these per cents. are derived and for much fuller details see Supplementary Analysis and Derivative Tables, Twelfth Census (1906), Tables X. and XII.

to any difference in the tendencies of the two classes. The best clew to the distribution of the native population at the beginning of life between city and country is found in the distribution of the children under one year of age, only one in five hundred of whom was born abroad. In 1900 there were 433,580 such children enumerated in the 160 cities of continental United States, each having at least 25,000 inhabitants, and 1,483,312 enumerated in the rest of the country.¹ But in this case also it may be fairer to exclude the figures for the Southern States. In the large cities of the North Atlantic, North Central, and Western divisions 384,473 children under one year of age were enumerated in 1900, in the country districts 811,451, so that more than two-thirds of the children born in the North and West and more than three-fourths of the children born in any part of the United States start in life outside of a city.

With immigrant arrivals the facts are very different. In the ten years ending June 30, 1900, there were 3,562,382 immigrants who entered the United States at some known port. This leaves out of consideration the immigrants who came in from Europe through Canada between 1893 and 1900, and whose point of arrival in the United States is unknown. Of these 3,562,382 immigrants, 3,497,009, or 98.2 per cent., came in at some port having at least 100,000 inhabitants, and 65,373, or 1.8 per cent., came in at some port of less population.

But it is needful, also, to take into account both the immigrants who came in through Canada and the unknown number of natives of Canada and Mexico who entered the United States. The number of immigrants from Europe landing in Canada and bound for the United States has been reported only since 1893-94. During the seven years 1893-1900 they numbered 81,116, and the per cent.

¹Twelfth Census, vol. ii., Tables II. and IX.

they formed of the number landing at known points in the United States in the same year rose steadily from 2.4 in 1894-95 to 5.5 in 1899-1900. It is reasonable to assume from the series of per cents that during the three years 1890-93 the immigrants landing in Canada for the United States were about 2.5 per cent. of those landing at known American ports during the same period. On this assumption they were about 38,390,—a number which, added to the 81,116, gives 119,506 immigrants through Canada to the United States for the decade 1890-1900, and 3,681,888 as the total immigration from all countries except Canada and Mexico during the ten years 1890-1900.

A rough estimate of the number of immigrants from Canada and Mexico to the United States during the same decade may be reached by a resort to the census figures of the foreign born. These show what ratio the natives of Canada and Mexico in the United States bear to the natives of all other foreign countries. The figures are as follows:—

DATE.	FOREIGN BORN.			Per cent. that Canadians and Mexicans make of all others.
	Total.	Canadians and Mexicans.	All other foreign born.	
1900	10,341,276	1,283,200	9,058,076	14.17
1890	9,249,547	1,058,791	8,190,756	12.93
1880	6,679,943	785,556	5,894,387	13.33
1870	5,567,229	535,899	5,031,330	15.61
1860	4,138,697	277,436	3,866,261	7.18
1850	2,244,602	161,028	2,083,574	7.73

From the foregoing figures it seems reasonable to assume that the immigration from Canada and Mexico, 1890-1900, amounted to about 14.17 per cent. of the immigration from all other countries. With the aid of this assumption the total immigration to the United States, classified with reference to point of arrival, may be given as follows:—

<i>Point of arrival.</i>	<i>Immigration 1890-1900.</i>
New York City	2,812,345
Some other port of 100,000+ inhabitants:—	
Baltimore	
Boston	
New Orleans	
Philadelphia	
San Francisco	684,664
Some known port having less than 100,000 inhabitants . .	65,373
Canada	119,506
1893-1900	81,116
1890-93 (estimated)	38,390
Unknown:—	
From Canada and Mexico (estimated)	521,300
Total	4,203,188

If we assume that all these 521,300 immigrants from Canada and Mexico and also all the 119,506 immigrants through Canada entered the United States at some place having less than 100,000 inhabitants (a most improbable hypothesis), then 706,179 of the 4,203,188 immigrants who arrived during the decade 1890-1900, or 16.8 per cent., entered outside a large city, and 83.2 per cent. entered at an urban gateway. We have thus fixed a maximum limit of 98.2 per cent. and a minimum limit of 83.2 per cent. for the proportion of our immigrants entering at a large city, and the evidence also warrants the belief that the true proportion is much nearer the upper than the lower limit. There seems little doubt that more than nine-tenths of the immigrants enter the United States at a city of at least 100,000 inhabitants.

If we grant this, we are in a better position for judging the present distribution of the foreign born between city and country, as reported by the census.¹ That distribution in 1900 is given below:—

	<i>Number.</i>	<i>Per cent.</i>
Total foreign born	10,341,276	100.0
Residing in all cities	6,859,078	66.3
Residing in cities of 100,000+	4,008,085	38.8
Residing in cities of 25,000-100,000	1,122,196	10.8
Residing in cities of 8,000-25,000	953,827	9.2
Residing in cities of 4,000-8,000	479,866	4.6
Residing in cities of 2,500-4,000	295,104	2.9
Residing in country districts	3,482,198	33.7

¹ Twelfth Census, Supplementary Analysis (1906), Tables X. and XIV.

If nine-tenths of these ten million immigrants reached the United States at some city having at least 100,000 inhabitants and less than four-tenths were residing in such cities in 1900, then more than half of our immigrants must have dispersed from the cities where they landed. But this is not all. Of the 4,008,085 foreign born enumerated in the cities of 100,000+ in 1900, only 1,978,350, or less than half, were in a seaport of that size. There must have been much migration of the foreign born from the seaport of arrival to another seaport of 100,000+; but, disregarding all such currents, it seems clear that at least 8,362,926 foreign born, or 80.9 per cent. of all those in the country, had left the port of arrival before the date of the census. The number of 1,978,350 foreign born, which is the maximum limit of the number who had not left the port of arrival, is about equal to the number of foreign born who had been in the United States less than 8.4 years. It seems, therefore, that the number of immigrants who remain in the port of arrival more than 8.4 years is not greater than the number who leave the port of arrival for some other part of the country in a shorter time than that.

The total reported immigration arriving at any known port in the United States between July 1, 1890, and June 30, 1900, was 3,562,382. Of this 2,812,345, or 78.9 per cent., entered at the port of New York. Of the total immigration reported and unreported (4,203,188), 66.8 per cent. landed at New York. Doubtless at least seven in ten of our immigrants arrive there, but only about one in fourteen of the children born in the North and West and one in twenty-two of the children born in the country are born in that city. Under such conditions the swarms of immigrants found at any time in New York are no more conclusive evidence of a tendency to remain there than

the clouds hanging around a mountain are proof that there is no wind at the summit to blow it away.

With regard to the first point the conclusion is that the foreign born constitute about two and one-half times as great a proportion of the population in the largest cities as they do in the rural districts, and that, the smaller the size of a city, the smaller, as a rule, is the proportion of foreign born in its population. But, when this fact is considered in relation to the places of arrival of these immigrants, it affords no evidence of a tendency on their part to cling to or stagnate in the cities of the country.

II. The evidence submitted thus far may be deemed inconclusive because the figures for all the foreign born living in continental United States in 1900 are combined. The foreign born of a generation ago, it may be urged, had a tendency towards the country districts quite as marked as the tendency of their successors towards the cities. Millions of survivors of the earlier currents of migration from foreign countries to the farming districts are still living in the North, and especially in the great agricultural States of the West. Figures for the total foreign-born population, therefore, if not irrelevant, are at least inconclusive. The objection has weight, and is entitled to a patient examination.

If it be true that recent immigrants have a stronger tendency towards cities than those who entered the country a generation ago, we should expect that the change in the decade 1890-1900 would be in the direction of an increased massing of the foreign born in the cities. The following table shows the per cent. of foreign born in each group of cities and in the country districts in 1890 and 1900:¹—

¹ For figures from which these per cents. are obtained and for per cents. in greater detail see Twelfth Census, Supplementary Analysis and Derivative Tables, Tables X., XI., XIV., and XV.

	Foreign-born Population in	
	1900.	1890.
Total	100.0	100.0
All cities	66.3	61.4
Cities having 100,000+	38.8	33.4
Cities having 25,000-100,000	10.8	10.8
Cities having 8,000-25,000	9.2	9.7
Cities having 4,000-8,000	4.6	4.6
Cities having 2,500-4,000	2.9	2.9
Country districts	33.7	38.6

Before considering the meaning of these figures, it may be well to add those for the Northern and Western States, in which about seventeen out of eighteen (94.4 per cent.) of the foreign born live.

	FOREIGN-BORN POPULATION IN					
	North Atlantic.		North Central.		Western.	
	1900.	1890.	1900.	1890.	1900.	1890.
Total	100.0	100.0	100.0	100.0	100.0	100.0
All cities	83.8	79.9	57.8	47.1	48.3	46.8
Cities having 100,000+	50.8	43.9	30.8	26.6	19.1	19.7
Cities having 25,000-100,000	13.9	15.5	6.4	5.6	14.0	11.9
Cities having 8,000-25,000	11.0	11.8	7.8	8.3	6.4	6.9
Cities having 4,000-8,000	5.3	5.5	4.1	4.0	4.5	4.4
Cities having 2,500-4,000	2.8	3.2	2.7	2.6	4.3	3.9
Country districts	16.2	20.1	48.2	52.9	51.7	53.2

These figures show both for the country as a whole and for the North and West that the proportion of the foreign born living in the country has materially decreased, and the proportion living in cities, especially the large cities, has much increased, and seem at first a clear confirmation of the increased tendency of our recent immigrants towards city life.

But the rapid growth of urban population and the slow growth of rural population are familiar facts. The increased proportion of the foreign born in large cities may be due partly or entirely to the increased proportion of the total population in those cities. A more significant comparison, therefore, is one showing the proportion of

foreign born to the population in 1890 and 1900. Such a comparison is made in the following table:—

	PER CENT. FOREIGN BORN IN TOTAL POPULATION.					
	North Atlantic.		North Central.		Western.	
	1900.	1890.	1900.	1890.	1900.	1890.
Total	22.6	22.3	15.8	18.1	20.7	24.8
All cities	27.8	29.0	21.2	25.8	24.6	31.2
Cities having 100,000+	32.1	34.0	27.2	33.8	28.0	37.5
Cities having 25,000-100,000	25.8	28.6	19.1	21.6	26.1	31.0
Cities having 8,000-25,000	23.6	24.8	16.5	21.8	22.3	25.7
Cities having 4,000-8,000	19.6	20.5	13.2	17.3	19.8	26.6
Cities having 2,500-4,000	18.3	17.6	14.0	15.5	18.8	24.8
Country districts	11.5	11.7	12.4	14.3	18.0	21.1

As the proportion of foreign born to the total population in the country at large decreased from 14.8 per cent. in 1890 to 13.6 per cent. in 1900, it would be expected that the proportion in the several classes of cities and in the several divisions would also be smaller. This expectation is confirmed by the above figures. But, if the foreign-born population has been massing disproportionately in the cities, as is generally believed, this tendency would manifest itself in a smaller decline in the proportion of foreign born in the great cities. Just the opposite is the fact. The decline in the proportion of foreign born to total population is greatest, as a rule, in the large cities and least, as a rule, in the country districts. Perhaps this difference may be stated most clearly as follows: in the North Atlantic division the proportion of foreign born in the population of cities of 100,000+ was 2.9 times as great in 1890 and 2.8 times as great in 1900 as the proportion in the country districts of the same division at the same date; in the North Central division the proportion in large cities in 1890 was 2.4 and in 1900 2.2 times that in the country districts; in the Western division the

proportion in large cities in 1890 was 1.8 times and in 1900 was 1.6 times that in the country districts. In other words, the differences between the large cities and the country districts in the proportion of foreign born to total population tended to decrease in the decade 1890 to 1900.

These figures seem to warrant, if not to compel, the belief, contrary to the prevailing conviction, that the foreign born are showing an increased tendency towards the country districts, yet I do not so interpret them. They should be judged with reference to two probabilities: first, that for many foreign born the large city is a way station on the journey to a smaller city or a rural district; and, secondly, that the average length of residence on the part of our foreign-born population was probably greater in 1900 than in 1890.

The preceding argument may be thought to have demonstrated the first point. Confirmatory evidence may be found, however, in the figures of the Twelfth Census, showing the number of years spent in the United States by the foreign born.¹

Distribution of the foreign-born population of city and country according to the duration of residence in the United States, 1900:—

DURATION OF RESIDENCE.	NUMBER RESIDING IN		PER CENT. OF TOTAL	
	Cities having at least 25,000 inhabitants.	Smaller cities and country districts.	For cities having at least 25,000 inhabitants.	For smaller cities and country districts.
Total foreign born	5,130,281	5,210,995		
Duration unknown	379,980	632,673		
Duration known	4,750,301	4,578,322	100.0	100.0
Less than 5 years	538,459	465,410	11.4	10.2
5 to 9 years	774,716	584,515	16.3	12.8
10 to 14 years	914,146	682,784	19.2	14.9
15 to 19 years	794,867	771,581	16.7	16.8
20 years and over	1,728,113	2,074,035	36.4	45.3
Median duration in years			15.9	18.6

¹ The figures from which the numbers and per cents. have been derived may be found in Twelfth Census, Supplementary Analysis (1906), Table XXIX.

The preceding figures show that the foreign-born population living outside of the 160 cities of continental United States had resided in this country in 1900 on the average about 2.7 years longer than the foreign-born population in those cities, an excess equal to about one-sixth of the time the city foreign born have been in the country. The argument that the currents have flowed and are flowing from city to country, although strengthened by these figures, is still incomplete, because they are consistent with the hypothesis that we have to do with the results of two currents of migration,—an earlier current to the country districts and a later one to the cities.

That our foreign-born population had been in the United States, on the average, a longer time in 1900 than in 1890 is an inference, almost a necessary inference, from the immigration figures of 1880 to 1900. The reported immigrants 1880 to 1890 numbered 5,246,613; those 1890 to 1900 numbered 3,687,564, the number in the earlier decade exceeding that in the later by more than one and one-half million. This fact would be almost certain to result in a longer average duration of residence in the United States in 1900 than in 1890. Unfortunately, the answers to the question, "Number of years in the United States?" introduced into the Federal census for the first time in 1890, were tabulated at that census only for the aliens, and consequently no comparison of results for 1890 and 1900 can be drawn.

In default of anything better the following computation may throw some light on the question whether the foreign-born population had been longer in the United States in 1900 than in 1890. Of the foreign born enumerated in the United States in 1900 the duration of residence of 90.21 per cent. was reported.¹ If the information had been asked and obtained with the same degree of

¹ Twelfth Census, Abstract, Table X.

completeness for the 9,249,547 foreign born enumerated in 1890, then the duration of residence of about 8,344,000 would have been ascertained. In 1900 there were 2,363,097 foreign born enumerated as having been in the United States less than ten years.¹ This is 64.1 per cent. of the immigrants reported as having come in during the preceding ten years. If we assume that 64.1 per cent. of the 5,246,613 immigrants who came in between 1880 and 1890 would have been found in the United States in 1890, and have reported their length of residence as less than ten years, there would have been about 3,363,200. On these assumptions the per cent. of the foreign born of known length of residence who had been in the country less than ten years would have been 40.3 in 1890: it was 25.4 in 1900. This computation goes far to confirm the theory that the average duration of residence of the foreign born was decidedly greater in 1900 than in 1890.

If the large city is for many immigrants a way station on the journey to the smaller cities and rural districts, and if the average duration of residence of immigrants in 1900 was materially greater than in 1890, this would have afforded time for a larger proportion of the immigrants to have reached their destination by the later date.

Thus far we have failed to find any evidence that the tendency of the foreign born towards urban life is any stronger or any weaker than the tendency of the natives of this country towards urban life. All the facts examined have been found consistent with the theory that the larger proportion of foreign born in our cities is due to the fact that nine-tenths of them arrive in cities, and that it takes them a long time to disperse from these centres.

The Twelfth Census, however, offers further interesting evidence on this point. The number of years in the

¹Twelfth Census, Abstract, Table XLVIII.

United States is reported for the foreign-born population not only of continental United States and of the several States and Territories, but also of the 160 cities each having at least 25,000 inhabitants, and for years under six by each year of residence. These figures make it possible to study the distribution over the United States and between city and country of the immigrants who have been in the United States a short period of time. The last census reported 201,128 foreign born on the first day of June, 1900, who had been in the country less than one year. The Bureau of Immigration reported 431,501 immigrants, other than immigrants from Canada and Mexico, to have arrived between June 1, 1899, and June 1, 1900. If we add 14.2 per cent. to this number for an estimate of the immigrants from Canada and Mexico in that year, we have an estimated number of 492,600 immigrants during the census year 1899-1900, of whom only 40.8 per cent. were found by the census at the end of that time. To attempt a reconciliation of these figures would involve too long a digression, but it may be well to mention that the census found 1,012,653 foreign born whose length of residence was unreported, and that probably very many of these were recent arrivals with whom the enumerators may have found it difficult to communicate.

The places of arrival of the 448,572 immigrants who reached the United States during the year ending June 30, 1900, may fairly be taken as indicative of the places of arrival of the 201,128 foreign born reported by the census as having been in the country less than one year on the first day of June, 1900. These immigrants reported by the Bureau of Immigration increased by 14.2 per cent. for the Canadian and Mexican immigrants, give a total of 512,092 for that fiscal year. Assuming that all those from Canada and Mexico arrived in the United States outside of a city of 25,000 inhabitants,—a most improbable hy-

pothesis, the main reason for which is that it is more unfavorable to my argument than any other which can be suggested,—we have the following figures:—

<i>Place of arrival.</i>	<i>Total immigrants 1899-1900.</i>	<i>Per cent. distribution.</i>
Total	512,092	100.0
New York City	341,712	66.8
Some other city of 25,000+	71,842	14.0
Total arriving outside a large city	93,548	19.2
Some place of 0-25,000	11,828	2.3
Through Canada	23,200	4.5
From Canada and Mexico	63,520	12.4

If the 201,128 foreign born of less than one year's residence reported by the census be assumed to have arrived at city and country ports in the same proportions as the immigrants of 1899-1900, they would have been distributed on arrival as appears below. Over against the number among these 201,128 estimated to have arrived at each class of place during the year is set the number found there by the census at the end of the year:—

<i>Place of arrival.</i>	<i>Estimated number arriving.</i>	<i>Number enumerated.</i>
Total	201,128	201,128
New York City	134,350	23,843
Some other seaport of 25,000+	28,160	10,929
Some city of 25,000+ not a seaport	0	54,204
Rest of country	38,618	109,152

The above figures show that within a period averaging six months after their arrival at New York City not less than 107,000 out of 134,000 immigrants, or four-fifths of the total number, had left that city, and dispersed over other parts of the country. Many of them doubtless went to some one of the other seaports of at least 25,000 inhabitants, and many arrivals at these other seaports doubtless removed to New York City. Yet the number found in all these other seaports by the census was 17,000 less than

the number who landed there; that is, at least three-fifths of the arrivals at those ports had left them for other parts of the country. On the other hand, more than a quarter of those who arrived in the country were found within six months at some one of the 149 cities having at least 25,000 inhabitants which were not seaport cities, and which must have been reached, therefore, by a process of migration and dispersion within the country. More than half of the total arrivals, also, were found outside of any city of that size; that is, in what might be called the country districts of the United States. These figures prove with a conclusiveness hitherto unattainable that the congestion of the foreign born in our large cities, particularly the seaport cities, is in no sense an evidence that the arrivals linger or stagnate there. On the contrary, the foreign-born population of the United States is in a process of incessant and most rapid migration over the face of the country, following the allurements of economic advantages and opportunities as they present themselves.

A more detailed study of the distribution of these recent arrivals may be found illuminating. They were distributed through the five main divisions and through the cities and country districts as shown in the following table:—

DIVISION.	Number of foreign born who have been in the United States less than one year.			Per cent. living in cities of 25,000.	
	Total.	In cities of 25,000+.	In smaller cities and country districts.	Among total population.	Among foreign born in U.S. less than 1 year
Continental United States	201,128	91,976	109,152	26.0	45.7
North Atlantic	129,665	68,561	61,104	48.0	52.9
North Central	45,087	16,963	28,124	23.1	37.6
Western	18,093	4,663	13,430	25.2	25.8
South Atlantic	3,965	1,291	2,674	12.4	32.6
South Central	4,318	496	3,820	8.4	11.6

The preceding figures show that four-ninths of the recent immigrants are living in the 160 cities which contain only about one-fourth of the total population. But they suggest, also, that this difference is due mainly to the region to which they first come. In the North Atlantic, South Central, and Western divisions these recent immigrants are distributed between city and country in almost the same proportions that prevail among the general population. In the South Atlantic and North Central divisions recent immigrants are massed in the cities. There are 37 States in the Union each of which had in 1900 at least one city of 25,000+ inhabitants. In 12 of these States the foreign born reported as in the country less than one year were more numerous in the cities than in the rest of the State. In 25 the recent immigrants were most numerous in the country districts. In Pennsylvania, for example, the foreign born who had been here less than one year and who were residing in 1900 in some one of its 18 cities of 25,000+ population, numbered 12,841. Those in the rest of the State numbered 20,205.

Additional evidence bearing upon the parts of the country to which recent immigrants are going may be found by computing the per cent. that the foreign born who have been in a place less than one year make of all foreign born in that place.¹ The figures show that in West Virginia the newly arrived immigrants constitute a larger proportion of the total foreign born population than elsewhere, and in Kentucky and Arkansas they constitute a smaller proportion than elsewhere. In the cities the largest proportion of recent immigrants is found in the State of Washington, the smallest in Kentucky. In the country districts the largest proportion is in West Virginia, the smallest in Kentucky, Missouri, and Arkansas. Can it be shown that this distribution of recent immigrants indicates

¹ See Twelfth Census, Supplementary Analysis, Table XXXIV.

a failure to appreciate the economic opportunities before them or that it could be materially improved if guided by any government agency?

We may pass now to a study of the distribution of certain nationalities between city and country. In the report of the Senate Committee on Immigration of 1896 the immigration from Austria-Hungary, Italy, and Russia, is referred to as undesirable and as tending to swarm in the cities. In the following table the nationalities most concentrated in the cities of 25,000+ in 1900 are indicated:—

COUNTRY OF BIRTH.	FOREIGN BORN.		
	Total.	In cities of 25,000+.	Per cent. urban.
Russia	423,726	317,798	74.9
Poland	383,407	239,946	62.6
Italy	484,027	302,324	62.4
Ireland	1,615,459	1,003,810	62.0
Bohemia	156,891	85,287	54.3
Austria	275,907	147,730	53.5
Hungary	145,714	77,879	53.4
Germany	2,663,418	1,339,351	50.2

The preceding figures show that the Russians, Poles, Italians, and Irish were most massed in the cities of the country, each of these four elements having between three-fifths and three-fourths of its numbers in the cities. The difficulties in adjusting the census figures of country of birth to those of the Bureau of Immigration for Russia and Poland have been found insuperable. For some years the Bureau of Immigration assigned the Polish-speaking immigrants to Poland, for others to the country now governing the part of Poland in which the immigrant was born. Because of this difficulty the distribution of the Italians has been chosen for special study.

To study the distribution of Italians from New York City between 1890 and 1900, it is important to ascertain

the number living in 1890 within the present limits of Greater New York. I have determined that number as follows, the figures for Queens and Westchester being estimates:—

New York County	39,951
Kings County	9,789
Richmond County	262
Queens County	948
Westchester County	184
Total	51,134

The number of Italians in 1890 within the present limits of Queens County has been estimated on the assumption that the part cut off from Queens in 1899 to form Nassau County contained in 1890 the same proportion that it did in 1900 of all the Italians in the former Queens County at the same date. The number of Italians in 1890 in the part of Westchester later incorporated in New York has been estimated as 10.1 per cent. of the total number of Italians in Westchester in 1890 (namely, 1,820) because 10.1 per cent. of the population of that county in 1890 was included in the part transferred to New York.

During the decade between 1890 and 1900 651,893 Italian immigrants landed in the United States. In the same period the number of Italians residing in the United States increased 301,447, a number equal to 46.2 per cent. of the current of immigration. During the same decade about 627,736 immigrants from Italy, or 96.3 per cent. of the total current, landed in New York City.¹ Assuming that 46.2 per cent. of these immigrants, or 290,000, remained in the country until 1900, and contributed to swell its population of Italian birth at that date (the others

¹ The figures for Italians landing in New York 1890-96, inclusive, are in the published reports of the Bureau of Immigration, those for 1898-1900 have been kindly furnished me from manuscript records of the Bureau, the non-existent figures for 1896-98 have been estimated on the assumption that the average proportion in the other eight years (96.3 per cent.) held true for those.

either returning or dying or filling gaps caused by deaths among the Italians in the country in 1890), and assuming, further, that none of these 290,000 removed from New York City, the Italian born population of that city in 1900 would have been 341,134. It was 145,433, indicating that about 196,000, or two-thirds, of the Italian additions to the population of New York City during the decade had left before its close.

A different method of analysis is made easier by some figures recently published by the Census Office. The country has been divided into urban and rural by putting into the urban class for 1890 and 1900 all places which had 25,000 or more inhabitants in 1890 and into the rural all the rest of the population. The urban population of Italian birth was 107,337 in 1890 and 296,040 in 1900, showing an increase of 176 per cent. in ten years. The rural population of Italian birth was 75,243 in 1890 and 187,987 in 1900, showing an increase of 150 per cent. in ten years. When one considers that at least nine-tenths of the additions to the foreign-born population are made in the first instance to the cities, and also that cities, especially in the North, have a much more rapid growth than country districts, it is hard to find in these figures any evidence of a tendency to city life distinguishing the Italians either from the native population or from other classes of the foreign born.

With regard to the second point the evidence seems to warrant the conclusion that neither recent immigrants as a class nor Italian immigrants who were selected as the most available national type of recent immigrants show any characteristic tendency towards or fondness for city life.

III. The evidence on the third point, that this tendency towards urban life is characteristic of illiterate immigrants, is so slight as to require little analysis. On De-

ember 13, 14, and 15, 1895, members of the Executive Committee of the Immigration Restriction League examined "about 1,000 immigrants over sixteen years" of age concerning their destination and their ability to read and write. The figures indicate that 865 were actually examined, of whom 331 were found on a test to be illiterate and 534 able to read. 17 per cent. of the 534 literates and 11 per cent. of the 331 illiterates gave as their destination some State of the Mississippi Valley.¹ The difference is too slight to be significant, the numerical basis too small to furnish more than a mere indication, the statements made at landing regarding the intended destination are untrustworthy as evidence of what residence will be chosen, and the illiterates as a class would know less of American geography, and be less likely to have definite plans. The same report recites evidence from the Commissioner of Labor's Report that the slum districts of Baltimore, Chicago, New York, and Philadelphia are largely tenanted by illiterate foreigners and their children. But this evidence throws little light upon the real issue.

If we were to admit that illiteracy is more prevalent among the urban foreign born, this would not prove a tendency of illiterates towards cities. It might be due either to the fact that the urban foreign born had been in the country, as already proved, a shorter time than the rural foreign born, and in many instances not long enough to have learned to read and write, or to the fact that the urban foreign born are the survivors from a more recent current of immigration, and that recent immigrants are more illiterate than those who formerly came to this country.

But first we may ask the question, Is illiteracy more prevalent among urban immigrants? The following table gives the figures for the city and country districts of New

¹ Fifty-fourth Congress, First Session, Senate Report No. 290.

York State. The per cent. of illiterates among the foreign-born white population of the cities of 25,000+ and the rest of the State, 1900, was as follows:—

<i>City.</i>	<i>Per cent. illiterates among foreign-born whites at least 10 years of age.</i>
Rochester	7.9
Syracuse	9.7
Albany	10.0
Auburn	10.6
Yonkers	10.9
Buffalo	12.0
Elmira	12.4
Binghamton	13.8
New York	13.9
Troy	14.0
Utica	16.0
Schenectady	16.1
Rest of State	16.1

Each of the twelve cities of 25,000+ in New York State, except Schenectady, has a lower per cent. of illiteracy among the immigrants than is found outside these cities. In other States similar results would be found. As a rule, illiteracy in any class of the population is more prevalent outside of cities than in them. Not merely is there a lack of evidence to prove the third point, there is also direct evidence to disprove it.

The first three positions being found to lack evidence, the third and fourth, which assumed their truth, fall to the ground. If there is no evidence of a disadvantageous or dangerous tendency towards cities on the part of immigrants as a class, of recent immigrants, or of illiterate immigrants, the main argument in favor of intervention by the government to distribute them properly falls to the ground.

WALTER F. WILLCOX.

THE RECENT GROWTH OF CO-OPERATION IN IRELAND.

PROBABLY no more interesting attempt has been made in recent years to extend the field of co-operative activity than that initiated in Ireland seventeen years ago. The economic conditions of Ireland are so peculiar that they have been generally looked to for instructive test of the working qualities of the particular forms of co-operation which have been introduced, as well as to throw much light on the possibilities of co-operation as a remedy for such conditions. The reports which have reached us from time to time, too, of the numerical growth of co-operative societies in Ireland¹ are sufficient assurance that this experiment is being conducted on a scale large

¹ The following figures, illustrative of the growth of co-operative societies, are taken from the Reports of the Irish Agricultural Organisation Society:—

DATE.	Dairy Societies.	Auxiliaries (unregistered.)	Banks.	Agricultural Societies.	Poultry Societies.	Home Industries Societies.	Bee-keepers' Societies.	Miscellaneous Societies.	Federations.	Total.
Mar. 31, 1894 . . .	33	8	—	—	—	—	—	—	1	42
Mar. 31, 1895 . . .	56	8	1	10	—	—	—	—	1	76
Mar. 31, 1896 . . .	69	9	2	30	—	—	—	—	1	110
Mar. 31, 1897 . . .	83	10	3	46	—	—	—	—	2	148
Mar. 31, 1898 . . .	123	13	15	77	—	—	—	13	2	243
Mar. 31, 1899 . . .	153	88	48	99	—	—	—	34	2	424
Dec. 31, 1900 . . .	171	65	76	106	—	—	—	59	2	479
Dec. 31, 1901 . . .	196	81	101	112	26	38	—	8	2	564
Dec. 31, 1902 . . .	247	75	145	123	31	50	17	14	3	706
Dec. 31, 1903 . . .	287	73	201	140	35	55	27	18	3	839
Dec. 31, 1904 . . .	269	59	200	130	25	54	21	16	3	777*

These societies, exclusive of the unregistered auxiliaries, had, on Dec. 31, 1904, an aggregate membership of 76,963.

* The falling off in the number of societies for 1904 is due to the dissolution of 131 societies, most of which had never got to work.

enough to make its results of considerable practical value. Yet it is not simply as an experiment in co-operation that this Irish movement should be judged. The primary object of those who inaugurated it was not the justification of co-operative faith, but the amelioration of Irish conditions. Co-operation with them was a means to that end. In this article, then, it is proposed to indicate in a general way how the co-operative experiment has worked and what it has done for Ireland.¹

The rise of co-operation in Ireland has been independent of the older movement in Great Britain. In England and Scotland co-operation has been taken up chiefly by the artisan population of the large manufacturing centres, and applied mainly to the ownership of distributive stores. In Ireland, where the people are far more scattered, and dependent on agriculture rather than on manufactures, all the co-operative societies officially connected with the movement, with the exception of a number of associations of girls engaged in making lace and crocheted goods and one association of shirt-makers, are composed of farmers seeking to improve their positions as producers. To find co-operative societies similar in constitution and function, we must look to the Continent, where agricultural conditions resemble those in Ireland more closely. Co-operation for purchase and sale and for improving breeds of stock has been a fixture in Western European agriculture since the '80's. Co-operative dairying also has been well developed in Germany, Switzerland, Holland, and Denmark. In Denmark co-operative bacon-curing is an important industry; in Germany co-operative associations

¹ The economic side of the movement alone is considered in this article. Those who wish to understand its full significance as a part of a broad plan for the regeneration of the Irish agricultural population, socially as well as economically, should read Sir Horace Plunkett's *Ireland in the New Century* (revised edition, Dutton & Co., New York, 1905). In this work the co-operative movement is fully discussed in its economic, sociological, and political aspects by its recognized founder and leader.

of wine-growers are common; and in France, where co-operative dairying is neither extensive nor remarkably successful, the production of wines and spirits seems to be carried on well. In almost every country of Europe there are associations for securing better facilities for agricultural credit. In some countries, as in Denmark and France, the state grants loans to farmers through the medium of such associations. In others the credit societies have no connection with the state, but obtain loans locally on the security of unlimited liability of the members and supervision of the expenditure of the loans. Not all of these forms of co-operation have been developed in Ireland; but the growth has been in similar directions.

The more important of the Irish co-operative associations are the "dairy," "agricultural credit," "agricultural," "poultry," "bee-keepers," and "home industries" societies. The co-operative dairy associations are organizations of farmers who have combined to equip and control the creameries in which the milk from their cows is manufactured into butter. The agricultural credit societies create a security by association which enables them to borrow funds for the purpose of lending them out to their own members. The agricultural societies aim principally at the joint purchase of agricultural requirements, such as seeds, artificial manures, and feeding stuffs, and the sale in bulk of agricultural produce; and the bee-keepers' societies at the joint purchase of hives and appliances and the sale of honey. Some of the agricultural societies also own pure-bred stallions, bulls, boars, or rams by which breeding animals are served at stipulated fees. The use of expensive agricultural machinery also is made possible by co-operative ownership for farmers on holdings too small to warrant individual purchase. The object of the poultry societies is the introduction of better breeds of poultry, of more scientific feeding, and of improved methods

of marketing eggs and table poultry. The lace-workers have been organized in home industries societies in order that they may secure new designs more readily and cheaply, obtain systematic instruction, and market their finished goods more advantageously.

The machinery of organization in the case of the agricultural, bee-keepers', and poultry societies is exceedingly simple. Each member must be a shareholder in his society to the extent of one share at least; but, as these associations require very little in the way of plant, their share capital is usually not large. The committee which conducts the business of the society is elected annually, each member of the association having one vote, regardless of the number of shares he owns. When supplies are to be bought or produce sold, the society takes the place of the middleman, buying from the wholesaler and selling to the members, and buying from the members to sell to the wholesaler. A small commission is charged on each transaction to cover the cost of management. Any profits which may accrue from the year's purchases and sales, or from the ownership of animals or machinery, are divided among the members, after interest on the share capital has been provided for, in proportion to the amount involved in the transactions of each with the society. The home industries societies, though differing in function, may be classed in organization with the agricultural societies. The expenses of management and instruction, in the case of these societies, are met by deductions from the proceeds of the sale of each girl's work.

The dairy associations are organized on the same broad lines as the agricultural, poultry, and bee-keepers' societies, but the nature of the business carried on necessitates a much larger share capital. This capital is subscribed by the members, each taking a certain minimum number of shares and as many more as he chooses. The shares are

usually paid in cash to the extent of one-fourth or one-half of the value, the balance being paid in milk. All the milk-producing farmers of the district within which the society operates are eligible for membership, but no one may supply milk to a society for a longer period than three months without becoming a member. The manager of the creamery and other employees are engaged by and are under the direction of an elected managing committee. Each member is paid for the milk he sends to the creamery in accordance with the butter fat it contains, at rates fixed by the committee. The profits on the business of the year, after interest on the share capital has been deducted, are carried to the reserve until the cash assets exceed liabilities, after which time 10 per cent. of the net profits go to the employees, and the remainder to the members in proportion to the value of the milk supplied by each.¹

Many of the dairy associations owning creameries have branches known as "auxiliaries" connected with them. These branches are similar in organization to the other dairy associations, with the exception that each holds a definite number of shares in the central dairy association to which it is auxiliary, and has a definite representation upon its managing committee. Their functions, however, are of a more limited character. The auxiliary society buys milk from its members, separates the cream, and then sends the latter to the central creamery for churning. The central association pays the auxiliary for the cream according to the butter fat it contains, at the usual rates, with something added to cover the cost of separation and carting. The auxiliary shares in the profits of the central society precisely as any other member. This auxiliary system has been adopted very generally, as few creameries could be kept fully employed with the supply obtainable

¹ The outline of the organisation of the dairy societies here given follows the rules recommended by the Organisation Society. These rules are not strictly adhered to in every case.

from an area small enough to permit direct delivery of the milk.

When we reach the agricultural credit societies, we have to deal with a type of organization different from that of the dairy associations. The credit societies in Ireland are modelled after the Raiffeisen credit associations which have been so successful in Germany. Membership is usually restricted to men whose character and financial standing are well known to each other; hence the area of operation of any one society is necessarily small. Unlimited liability of all members, jointly and severally, for all debts of the association, furnishes security for loans from individuals, joint stock banks, or government departments.¹ These deposits are then lent out to the members. The highest interest allowable on deposits is 4 per cent.; that on loans to members, 7 per cent. Members alone can borrow from a society, and then only after the board of directors has been satisfied that the money is to be devoted to a purpose which will enable the borrowers to repay the loan, interest and principal. Borrowing members must furnish two securities (neither of whom may be in the debt of the society) or sufficient bonded or chattel security. Besides a board of directors, a committee of supervision is usually elected, whose duty it is to see that all loans are expended for the purpose for which they were granted; this committee can recall any loan which is not being properly used. The officials of the association are unpaid, and no dividends can be declared. All profits go to the reserve fund, which is never to be divided.

Although, for the sake of clearness, the co-operative societies have been classified in the foregoing description according to their functions, it should not be assumed that

¹ The Department of Agricultural and Technical Instruction for Ireland and the Congested Districts Board loan sums varying from £50 to £100 to agricultural credit societies in the poorer localities.

these various functions are mutually exclusive. Many dairy associations, for instance, buy and sell requirements and produce for their members, and the work of an agricultural and of a poultry or bee-keepers' society may be done by a single organization. Associations have been formed, too, with objects in view other than those mentioned above; but such associations are not sufficiently numerous to warrant consideration as representing important phases of the co-operative experiment.¹

The organizations next above the local societies in the co-operative scale are the federations. Of these the most important are: the Irish Co-operative Agency Society, the Irish Agricultural Wholesale Society, and the Irish Bee-keepers' Federation. What the local agricultural societies do for their individual members these federations undertake to do for the local societies which constitute them. The first federation established—the Irish Co-operative Agency Society, formed in 1895—at first acted both as a selling and buying agent for the societies, but later gave up its supply business. This branch of the trade was taken up in 1896 by the Irish Co-operative Agricultural Agency, which was reorganized in the following year under the name of the Irish Agricultural Wholesale Society.² The share capital of the Agency Society is subscribed by its constituent associations, each taking at least twenty £1 shares, of which one-fourth must be paid up. The Wholesale Society, however, found it necessary

¹ It may be mentioned that an attempt has been made to introduce a scheme of co-operative insurance of live stock, but the idea has not taken hold well as yet. Small farmers are greatly in need of some system of insurance to lighten the heavy loss which the death of an animal entails, yet the area of local acquaintance, which sets the limits to the operation of most co-operative activities, is too small for an area over which to spread the risk of loss of stock by disease. In France, where co-operative live stock insurance has had a very satisfactory development, the local societies are affiliated with the central organisation, which assumes a large proportion of the risk, thus distributing it over a considerable area.

² The Wholesale Society also acts sometimes as a selling agent of produce other than butter.

to issue 5 per cent. cumulative preference shares in addition to the ordinary shares held by the federating societies, in order to get sufficient working capital. Both federations are managed by boards of directors elected by the shareholders, and both divide profits over and above capital and reserve charges among the various constituent associations, in proportion to the volume of business done with each. The preference shareholders in the Wholesale Society have priority in the matter of dividends, but, aside from this 5 per cent., they have no share in the profits. The bee-keepers' societies formed their federation in 1902. It is similar in organization to the Agency Society, but engages in supplying requirements as well as in the sale of honey.

Above the local societies and the federations is the Irish Agricultural Organization Society, the central body of the Irish co-operative movement. This society was founded in 1894, to extend the work of co-operative organization and of education in co-operative principles, previously carried on by a few philanthropic individuals, and generally to further the interests of co-operation and of Irish agriculture. The members of the society are of two classes, subscribing individuals and affiliated co-operative associations. Although the individual members have always been the main support of the society, it has been their intention from the first that the management of the Organization Society and the control of the movement in general should ultimately be taken over by elected representatives of the affiliated associations. In pursuance of this policy the local societies were early given representation upon the managing committee of the central body. This representation was gradually increased, and now the affiliated societies elect sixteen members of the committee to four elected by the individual members. The twenty members thus elected co-opt four others, and with these

and four additional members, who sit *ex officio*, constitute the committee which formulates the policy of the Organization Society, and employs a secretary and other officials to put it into execution.¹

We pass now to the actual work of the local co-operative societies. A fair criticism of that work, however, must be preceded by a brief statement of the agricultural conditions existing in Ireland in 1889, the year in which the campaign for organization was begun.

The agricultural industry, always the main source of livelihood of the greater part of the population, was then in a depressingly unsatisfactory position. The invasion of Europe by American food products had reduced the profits of farming to an extent which made the future of the smaller holders problematical; and the great majority of the holdings in Ireland are small.² For the men with many acres American competition in the production of the cereals merely hastened a movement from tillage to grazing which had long been in progress, and in cattle-raising the rich pasture lands of Ireland allowed them to hold their own. To those on holdings of average size, however, grazing offered no escape from the new conditions which confronted them. Properly farmed, their holdings might yet yield considerable profit in the production of butter, eggs, and bacon, for which England had long looked to Ireland. But even in these branches of agriculture they had lately been beaten by foreign competitors. The Irish farmers were small producers, and, acting in isolation,

¹ A very good account of co-operative organisation in Ireland (and on the Continent as well) may be found in a pamphlet by Mr. Herbert G. Smith, published by the Irish Department of Agriculture (Dublin). It is entitled *The Best Methods of Organisation for Agricultural Co-operation and Credit*. In a collection of articles published in book form by the same department under the title of *Ireland Industrial and Agricultural* is one on *The Work of the Irish Agricultural Organisation Society*, written by the secretary, Mr. R. A. Anderson, which gives a good concise view of the whole movement.

² The average size of Irish holdings is about 28 acres; only 28 per cent. of the holdings are above 30 acres in extent.

they were unable to meet the demands of buyers in the large distributive centres for regular consignments of butter and eggs of uniformly good quality. Hence the markets they once held were passing to the large producers and to small farmers on the Continent, especially in Denmark,¹ who had overcome the difficulties of small-scale production by co-operative association. The profit in raising bacon pigs was lowered, too, by the fact that the farmers dealt individually with the curers or with the middlemen who purchased for the curers in the markets, and were consequently at a disadvantage in settling the price of their swine.

Combination for the purpose of marketing their produce was an urgent need of the Irish farmers, but it alone would not bring them prosperity, for they failed by much to get the most possible out of their holdings. Most of these were too poorly equipped to permit good farming. Necessary improvements in the way of the construction or repair of buildings, drains, and fences, and of the manuring and liming of land to prevent exhaustion of the soil, were generally neglected. This characteristic of Irish farming was, no doubt, due to the system of land tenure which had long prevailed. Before 1870 the vast majority of Irish farmers were tenants at will, with no legal security for the continued enjoyment of improvements

¹ The change which had come over Danish agriculture in the preceding three or four decades offered a splendid illustration of how a small country of peasant proprietors could advance from a very depressing situation to one of wide-spread prosperity. The agricultural regeneration of Denmark was undoubtedly promoted by the existence of a thorough system of popular education, which has made her people well trained in their work, progressive, and quick to see and take advantage of an opening, and by the fact that 90 per cent., at least, of her farmers own the land they cultivate. These two influences made the rapid and successful development of co-operation in Danish agriculture possible. Where Danish experience touches Ireland is on the Englishman's breakfast table, for Danish bacon, butter, and eggs had by the end of the '80's usurped the place in English consumption formerly held by like products from Ireland. Although the Irish have adopted Danish methods very largely, they have not been able to recover the lost ground completely, as their competitors have steadily increased their successful co-operative activities.

they might make on their holdings or compensation for them if evicted. The landlords, as a rule, made no improvements. After 1881 the tenant was legally protected against capricious eviction, and entitled to compensation on vacating a holding for the improvements he could prove before a court he had made on it. But the system of "judicial rents" then established, under which rents were fixed by land courts for fifteen-year periods in cases of disagreement between the landlord and tenant, was a direct incentive to the latter to allow the holding to fall into a woeful state in the years immediately preceding the fixing of a new rent.¹ As might be expected, methods of farming under these conditions were backward even to crudeness. The average farmer kept half a dozen inferior cows, which were pastured in summer, and usually in winter also (except in the north), and but poorly fed. From these cows he obtained milk in the summer and calves in the spring. The latter were kept for a year or eighteen months, nearly all of the time on pasture, and then sold to be fattened for beef by eastern graziers or English or Scotch farmers. Stall-feeding, even in winter, was uncommon. If the farmer had housed and fed his animals properly, he could have gone in for winter dairying or fattening of cattle. But such a system of farming would involve the raising of more roots, fodder, and grain, and tillage farming had sunk very low in Ireland. If co-operation was to put Irish farmers on a level with their competitors, it obviously would have to encourage them to become better farmers, as well as enable them to market their produce more profitably.

¹ Government advances for the purchase of holdings for the tenants, where the landlord and tenants agreed upon the purchase price, were available after 1885, but at this time very few tenants had bought their lands. Even now, after the passage of the act of 1903, with its advance of £100,000,000 for the purchase of tenants' holdings, and an additional £12,000,000 to provide a bonus of 12 per cent. for the landlord as an inducement to sell, most of the farmers are paying judicial rents.

The hardest problem for those who aimed to raise Irish agriculture by means of co-operation was presented by the Irish farmers themselves. In their attitude the effects of the experience of generations with English land laws and English governments were only too evident. They could not see the gain from trying to improve their holdings while the agrarian question remained unsettled; they feared that England's free-trade policy had exposed them to a competition which, do what they would, they could not meet; and they believed that permanent economic progress could not be secured until Irish economic interests were guarded by an Irish legislature. The historical heritage of Irish farmers, then, made them, as a rule, rather backward in industry and forward in politics. On the industrial side they were unprogressive, "easy-going," and with little confidence in their ability to do anything for themselves. Many of them also lacked confidence in the industrial ability of their neighbors, and in many districts this was supplemented by sharp differences in politics or religion, or both. Such men were not promising material for co-operators. Yet the advocates of co-operation, favored by the Irish genius for organization, have persuaded them to form societies in large numbers. What lies behind that numerical success, and how far it has availed towards the betterment of the conditions which made the odds against successful co-operation so heavy and, at the same time, the need of it so great, we shall now proceed to examine.

Beginning with the dairy associations (for they come first in order of establishment and in point of numbers), we find that many of them have met with very great success. Men with no previous commercial training or acquaintance with up-to-date business methods, living (as most farmers do) in comparative isolation, differing often from one another in politics or religion, have voluntarily associated,

and with results highly satisfactory, in the ownership and management of a specialized factory industry. In the equipment of their plants and in the technique of butter-making many of the societies have the best in machinery and in method. The product of their creameries has carried off many prizes in competitions open to the United Kingdom, and in the "surprise" butter competitions held in Ireland by the Department of Agriculture a large majority of the prizes regularly go to co-operative dairy associations. These societies, too, have introduced new ideas in the churning and marketing of butter, which have almost revolutionized the dairy industry. When they were first organized in Ireland, large quantities of butter were still made in home dairies, under varying conditions of skill and cleanliness. The co-operative associations introduced the creamery system, produced better butter of a more uniform quality, and, by paying more attention to packing and consigning, gradually won a reputation for their product. All the profits resulting from the transfer of butter-making from the home dairy to the creamery, and from increased prices consequent upon the improvement of the market opinion of their butter, went directly to the milk producers. Not less important than the direct increase in the profits of farming is the strengthening of the industrial character of the individual co-operators, who had by their own persevering efforts won success in so difficult an undertaking.

Unfortunately, the above description of the working of some of the associations does not apply to all; there are many whose history is far less bright. The reasons for the comparative failure of the less fortunate societies are many; the mention of a few may be instructive. To begin with, many of the dairy associations are not completely co-operative. In the case of some, the business is done on a share capital subscribed by a few members only or

on a loan or credit obtained on the security of a few.¹ The great majority of the members of such societies are merely milk suppliers to a creamery in which they have little or no financial interest, and for the management of which they feel no responsibility. The failure of a dairy "society" organized on this basis may be hastened by the withdrawal of milk by members whose interest in the financial welfare of the association is not large enough to prevent their marketing their milk elsewhere. There are cases, to be sure, where a small number of men have furnished the capital or given security for loans to enable an association to equip a creamery, and the results have been very beneficial. This may have been justifiable in the early days, when failure to organize co-operatively meant the surrender of the field to individual capitalists or entrepreneurs. But there is great danger in the continuance of the practice. As a way out of the difficulty, it has been suggested that, instead of having a small share capital largely paid up, the societies should increase their nominal capital without calling up a greater amount of cash than is paid in at present. Bank overdrafts needed to carry on the business, or credit from machinery manufacturers, would then be obtained on the security of the pledged capital, for which each member would be liable to the full extent of his shares. This expedient is intended to guarantee collective responsibility without inflicting hardship upon members who may find it difficult to pay the cash equivalent of a large number of shares at the outset.

Another defect in the organization of many dairy associations, one very similar in character and in its consequences to that just discussed, is the failure to include as responsible members all the farmers supplying milk to the

¹This is often because the creditor insists upon the security of a few of the strongest men, rather than accept a claim on the society as a whole.

society. Milk suppliers who are not members are in the same position as members who have little pecuniary interest in the society. Both are looking for the highest price obtainable for their milk, and will turn only too readily to a creamery which, for purposes of its own, is paying temporarily a higher rate than is paid by the dairy association to which they happen to be sending their milk at the time. As the charge for maintenance of plant and minimum running expenses, which forms part of the expenses of production of every pound of butter made in the creamery, decreases as the quantity of butter turned out increases, a falling off in the milk supply reduces the amount the committee can afford to pay for milk. Hence a serious defection on the part of the suppliers means failure for the society suffering it. The Organization Society recommends that non-members be not allowed to supply milk to co-operative creameries, but the competition for milk is often so keen that this advice is disregarded, although it may be embodied in the rules of the societies. In many districts, in fact, co-operative creameries have been planted too closely together to allow all to count on a proper milk supply under the most favorable conditions. If some of the weaker societies in the creamery "congested districts" were wiped out and membership made actually a condition of supplying milk to those remaining, the dependence of dairy associations upon the good-will of non-members would be at an end. The Danish dairying societies, recognizing that a regular supply of milk is a *sine qua non* of successful co-operative dairying, bind their members to send all their milk to the societies to which they belong under penalty of the payment of a heavy forfeit.¹ As such agreements have been declared non-

¹ In Denmark the members of co-operative societies take no shares, unlimited liability and agreements to deal with no other parties being the rule. This, of course, gives the societies more solidarity than is possible under the Irish system, where everything is based on the farmer's interest as a milk supplier rather than on his obligation as a member of a society.

enforceable at law in Ireland, the dairy associations are called upon to take stringent measures to protect the great majority of the members from injury at the hands of a few.

Other difficulties experienced by the dairy societies arise less from defects in organization than from the nature of the problem presented wherever men of ordinary capacity and judgment attempt the conduct of a business requiring technical skill and ability of a particular kind. Though it is to the interest of members to be alert in all matters connected with the business of their society, they often grow strangely careless or apathetic; they are not equal to the strain of continuous watchfulness and responsibility. Lethargy on the part of the members has its effect upon the *personnel* of the committee and the character of the service it renders to the association. Too much is left to the manager, the accounts become muddled, and the society is involved in financial loss. Even where the members and the committees pay close attention to the affairs of their organizations, success does not always follow. The ordinary farmer is not easily convinced that a high-salaried manager, if he is a good one, is really a source of profit to his employers. Often the members of a committee are reluctant to pay to their manager a salary greater in amount than the annual net return from one of their farms. Many of the societies, too, neglect to enlist the co-operation of their own employees by carrying out the principle of profit-sharing. The provision that the employees shall receive 10 per cent. of the net profits is usually found among the rules governing the organization of these societies, but the committees often set the rates of payment for milk so high that there are no profits to divide.

There is still another important reason for the unsatisfactory experience of some of the dairy associations,—one

not due to any defect inherent in or incidental to co-operation as such, but rather to a situation which co-operation may do much to remedy: namely, the lack of a proper supply of milk in winter. Most co-operative creameries have to curtail their operations and some to suspend altogether during the winter months, because Irish agricultural practice (except in some districts in Ulster) does not favor the feeding of cows with the object of securing a regular winter supply of milk. In consequence of inability to obtain milk to churn, the comparatively expensive plants belonging to the societies have to lie more or less idle during the winter months, and a market for butter has to be sought anew each spring. It is hoped, however, that the ownership of the creameries will influence the farmers in favor of winter dairying to an extent that will remove the difficulties arising from a falling off of the milk supply during that season.

In the light of these observations it seems that the attempt of the milk suppliers to carry on the manufacture of butter in creameries by associative ownership has not been altogether successful as a co-operative experiment.¹ There is a tendency in ill-balanced societies to allow co-operation to sink into philanthropy on the part of the few and selfishness on the part of the many. Even where the organization is mechanically perfect, the co-operators have, in many instances, been lacking in the discrimination and energy necessary for success. The experience of the large

¹ There are no statistics available by which we can measure accurately the success of the dairy associations. In 1904 46 were dissolved, and of the 269 societies mentioned in the 1904 Report of the Organisation Society 14 were entered as not working, and 38 of the others did not furnish returns. Many of those that did send in returns show too low a price paid for milk and too high a cost of production for a pound of butter (exclusive of the cost of the milk) to allow their ventures to be considered profitable to the members. It may, however, be safely asserted that, apart from the social and moral benefits claimed for the co-operative dairying movement, there has been in most cases a very considerable economic advantage from the introduction of the new methods of butter production, and that the condition of the members of even the worst societies is much superior economically to what it would have been, had there been no co-operative movement.

number of societies that have conquered all difficulties is, to be sure, proof that co-operative dairying is actually practicable. Yet a comparison of the working of these societies with that of the societies whose troubles we have been discussing will show that the success of the former is due to the exercise by their members of qualities by no means universal among Irish farmers to-day. When we consider, however, the adverse circumstance under which the societies were started, the results already accomplished are sufficient to justify the attempt, even from the standpoint of co-operation. At all events, the economic and social good which has followed upon the co-operative dairying experiment mark it as an absolute advance, no matter how the apostles of co-operation may regard it.

The agricultural, poultry, and bee-keepers' societies have met with more uniform success than the dairy associations as exponents of the superiority of co-operation over individual effort. They seem, in fact, to have seized upon that form of co-operation which offers the maximum of benefit for the minimum of risk. Association for combined purchase and sale requires neither the equipment of a plant nor the continuous employment of a highly trained specialist. Hence apathy or neglect on the part of members, though affecting the ability of the society to secure better terms for those still faithful, does not involve them in financial loss. That members do sometimes become indifferent cannot be denied.¹ Many of the societies, too, are deficient in the matter of account-keeping, and a few have lost through an unwise extension of credit to their members. Yet, on the whole, the machinery of organization has been found to run very smoothly under the intelligent direction of members who have combined a high level of interest in

¹ The reduction in prices effected by the societies has led to a general cutting down of prices of agricultural requirements in the competitive trade, so that there is no longer the same inducement to co-operate in purchasing them.

the affairs of their societies with intelligence and ability in their management.¹

The activity of the agricultural and poultry societies has brought about a considerable advance in Irish agricultural economy. Previous to the introduction of collective action the farmers purchased their seeds, fertilizers, and feeding stuffs in small lots from local merchants, the poorer farmers usually on credit, in which case the customer-debtor was obliged to leave price and quality to the shopkeeper-creditor. The co-operative associations, by buying directly from the wholesalers or from the Wholesale Society, have been able to secure agricultural supplies for their members at much lower rates than formerly ruled, and have insisted on guarantees of purity, backed by analyses. As the financial standing of the societies often enables them to obtain their goods on ninety days' to six months' credit, with no advance over ordinary trade quotations, their members can obtain a few weeks' grace in payment, and still reap all the other advantages of co-operative purchase. Lower prices for fertilizers and feeding stuffs of guaranteed purity not only mean a direct money-saving to the farmers, but they lead to a more extensive use of these agents, and, consequently, to more profitable farming. This movement in the direction of more scientific agriculture is, in many cases, furthered by co-operative ownership of improved machinery and of breeding animals.

On the side of marketing farm produce a reform is also well under way. Consignment in bulk of weightier produce, such as grain and vegetables, has already brought better prices from the buyers and lower rates from transportation companies. Bacon pigs are now shipped directly to the curers by the societies to which their owners belong,—a

¹ The trade of 92 agricultural societies which sent in the necessary figures for 1904 amounted in that year to £67,523. 141 dairy societies also sent in returns of trading in agricultural requirements to the value of £54,679.

practice which enables the farmers to drive much better bargains than formerly. The poultry societies, too, have adopted the Danish system of collecting, classifying, and packing eggs for shipment in large lots, and, though they have been handicapped in their search for markets by the lack of a federation of the poultry societies, they have greatly increased the profits of poultry-keeping.¹ Such a federation has recently been formed, and is expected to give a great stimulus to the Irish egg trade. The sale of table poultry is also one of the objects of these societies, but much has yet to be done by the members in the way of improving the breeds of fowl kept and of more scientific feeding before this side of the business can be very far developed. The organization of the poultry-keepers into societies has greatly facilitated the working of the schemes of the Department of Agriculture for improving the breeds of poultry and providing instruction in poultry-keeping,—a work originally begun by these societies. What the poultry societies have done for poultry-keeping the bee-keepers are trying to do for their industry by the use of similar methods.

¹“The egg industry of Denmark has risen by leaps and bounds, so that at present it is becoming a very important feature in the agricultural development of the country, and this great increase of trade is entirely attributable to co-operation. The greatest institution for the export of eggs in Denmark is the Danish Co-operative Egg Export Society, having its headquarters in Copenhagen, with eight similar though smaller centres distributed throughout Denmark. The eggs are purchased from the farmers by weight in bulk, irrespective of size, and are then packed at the centre of that society. The cases, when packed, are despatched to one of the nine district packing stations. The eggs are then carefully sorted over and graded by hand and eye according to size, and passed on to the dark room, where the eggs are subjected to examination over a very strong light. After they pass out of the dark room, they are stamped with the trade-mark of the Federation, and packed in boxes for shipment to England. Every egg can be traced to the original supplier, as the collector in the country knows the name of the person from whom he obtained it by the number on the egg; and any member guilty a second time of sending in stale eggs is expelled from the society.”—*Report on Co-operative Agriculture and Rural Conditions in Denmark*, Bulletin No. 7, Miscellaneous Series, Department of Agriculture, Dublin. The Irish Co-operative Poultry Societies are still far behind their Danish rivals in marketing eggs, yet their methods are a great improvement over those that formerly prevailed. The farmers’ wives used generally to sell their eggs to itinerant pedlars, through whom they eventually found their way to English markets so stale, dirty, and poorly packed that the term “Irish” as applied to eggs was more a warning than a recommendation.

Though at work for a few years only, they have, with the aid of their federation, already secured a great reduction in the prices paid by their members for hives and appliances and an increase correspondingly large in the price received for their honey.

The story of the agricultural banks is as encouraging as that of the trading societies. The provision of credit by co-operative association has been shown to be entirely feasible in Ireland, as it has been elsewhere. The majority of the banks have been well managed by the co-operators. A large number of loans have been made,¹ members have been remarkably punctual in meeting their obligations, and many societies have accumulated a considerable reserve. In some localities, to be sure, associations have been started before the members had thoroughly grasped the principles on which they should work, and not a few have suspended, apparently from inanition. Yet these suspensions, so far as is known, have not resulted in loss to members or to depositors. They may be ascribed more to an indiscriminate multiplication of societies than to difficulties inherent in the system of co-operative credit. This system has, in fact, been given substantial recognition by the Department of Agriculture for Ireland and by the Congested Districts Board, in the shape of loans to societies and grants to help defray the expenses of organization. Loans of public money at a low rate of interest have bridged the gulf between theory and practice in co-operative credit for many farmers in straightened circumstances, with great resultant benefits. Nevertheless, the stimulant is dangerous if not carefully administered. Ease in obtaining loan capital from the outside may lead to a lessening of anxiety to attract all local idle funds into productive uses, or even to a weakening of the sense of responsibility among

¹ The figures at hand show a total of £31,742 granted in loans by 158 societies down to December 31, 1904.

the members. With proper caution in the placing of loans, however, this policy of the Department and of the Board may well be continued without reducing the societies to the level of mere distributing agencies.

Wherever the credit associations have gone to work on sound lines a noticeable improvement in agricultural conditions has attested their activity. Those who are unacquainted with the economy of the Irish "small" farmer can, with difficulty, realize how he has been for years hampered (and still is) by a lack of working capital.¹ His buildings were few and out of repair, his fences and drains neglected, his land starved for want of fertilizers, his stock ill-fed and poorly sheltered, and his produce and lean live stock sold at low prices in poor markets, to enable him to get ready cash to meet his rent or other pressing calls. Before the advent of the co-operative banks this barrier to progress in the shape of want of capital could not be removed by borrowing. Few borrowed for productive purposes. The great majority of those who sought loans wished to use them as a means of escape for the time being from difficulties which they found more nearly impossible to meet each year. The inability to use credit as a productive agent was due to the high rates of interest charged by the local money-lenders or "gombeen men,"—the only parties from whom the poorer farmers could borrow. These individuals, taken as a class, charged their victims rates of interest so exorbitant that the principal often doubled in three or four years. The joint-stock banks were above the heads of the people who formed the clientele of the "gombeen men." The banks could not bother with small loans.² They had to demand security

¹ The farmers here spoken of are men with poorer holdings than the "average" farmers whose methods were described above. The men who benefit by the working of the credit societies are generally on a par as regards financial position, as the rule of unlimited liability keeps out substantial men.

² The average size of the loans granted by the agricultural credit societies is £5 10s.

which the ordinary small farmer could not furnish without severely crippling his productive resources, and their terms of repayment were too rigid to meet the farmers' convenience. Knowing the quality of the mercy shown by the "gombeen men," therefore, the ordinary small farmer looked upon borrowing as an evidence of approaching economic dissolution.

The agricultural societies declared war on "gombeenism" as applied to the purchase of agricultural supplies. It remained for the credit associations to undermine the bad practice by providing credit facilities of which the small farmers could avail themselves. These societies, by lending to their members for flexible periods, at reasonable rates of interest and for productive purposes only, have stimulated them to greater industrial activity than most people thought them capable of. Farms that were before slimly stocked and but poorly cultivated are now worked much more fully; necessary but neglected improvements have been undertaken with every prospect of completion, and stock that before would have been sacrificed to meet an urgent obligation is now held for the best market. This is the recital of but small doings, if we measure them by the amount of money involved; but the quickening of industrial effort, and the spread of commercial education and economic enlightenment among humble people, are of immense importance, if we look to the results in the development of industrial character.

The last group of societies containing members sufficient to command separate consideration is that of the home industries associations. These organizations have enabled girls who formerly worked in isolation to compare their methods with those of fellow-workers, to receive instruction from experts, to learn the latest designs, and to market their goods directly instead of through merchants acting solely in their own interests. Yet the extension of co-operation

to this field of work has been accompanied by an overproduction of some kinds of Irish lace, which has done much to offset the internal economies gained by association. The making of lace and crochet by hand can only be profitable if these goods show such artistic workmanship that they can be easily distinguished from machine-made articles of similar character. The increase in the number of girls employed in this industry which followed the organization of the societies caused a much larger output, including some work that was not of first-class quality. Consequently, the whole trade suffered a depression. If sound market conditions can be restored by an insistence on a high standard by those in charge of the societies, co-operative association will make this work much more profitable as well as much more attractive to those engaged in it.

The advantages which individual members have derived from co-operative organization have not induced the societies to associate to the degree that one might expect. Strong federations, such as have been built up on the Continent, have been comparatively undeveloped in Ireland. Yet, in spite of their lack of capital and the lukewarm support received from most of the local associations, the Agency and the Wholesale Society have undoubtedly made considerable gains for the societies constituting them.¹ The Agency Society showed its strength by regaining a sound financial position in a few years, after having lost all its capital in its first year of existence through law-suits, bad debts, and general inexperience. The improvement in the selling price and market position of Irish butter is largely due to the activity of this society in persuading many of the dairy associations to adopt a common brand and maintain a high standard for their

¹ The business of the Agency Society in 1904 amounted to £169,273, and that of the Wholesale Society to £58,843.

butter, in establishing shipping depots and storage warehouses, and in keeping in touch with market conditions in the United Kingdom. The Wholesale Society, too, has increased its business each year since its foundation, and is gradually winning a position which allows it to exercise a considerable influence upon the prices of agricultural requirements. The members of the societies which have been able to secure their seeds, fertilizers, and agricultural machinery more cheaply from the Wholesale Society than from those who previously supplied them are not the sole gainers by its establishment, for this has resulted in a general lowering of the prices of these articles throughout the country.¹

It remains to examine the work of the central body,—the Irish Agricultural Organization Society. In its earlier years this society put new life into the agricultural industry and new hope into agriculturists, and it made co-operation a living economic force. As an organizing society, it conducted a campaign of education in the principles of co-operation. It taught farmers how to form associations on equitable lines, and assisted them over the difficulties of the first few months; it furnished inspectors and instructors to help in launching aright the technical work undertaken by the societies; it aided in the diffusion of agricultural knowledge by publishing leaflets on important agricultural subjects; and it contributed in its whole activity, more than any other agency, to the economic revival which has spread over Ireland in the last few years. As the mouthpiece of Irish agricultural opinion, it secured legislation against the sale of impure seeds, fertilizers, and feeding stuffs; it forced better terms for shippers of agricultural produce from the railway companies; and it led directly to the creation of a Department of Agriculture

¹ The Report of the Organization Society for 1902 calls attention to the successful issue of a campaign carried on by the Wholesale Society against the manure manufacturers' "ring."

and Technical Instruction for Ireland by voicing the demand for such a department, and organizing the farmers in a way to enable them to take full advantage of state aid to their industry. Above all, the Organization Society brought together men formerly separated by political or religious differences on a common platform, which had as its central plank the furtherance of Irish economic interests.

When the Department of Agricultural and Technical Instruction was established in 1900, the Organization Society was at the height of its influence. With the advent of the new department a change in the status of the older body was called for. Having passed over to the department the work of agricultural education and the guardianship of Irish agricultural interests, the reason for the continuance of the Organization Society became solely co-operative. It had full scope for its energies, however, in the organization of new societies and the exercise of a strengthening supervision over those already in existence. Unfortunately, the society seems to have disregarded the second part of what evidently should have been its programme, and to have concentrated its attention upon getting as many new societies as possible on the co-operative register, with the result that the movement has, in the last few years, grown extensively rather than intensively, in numbers rather than in internal strength.¹

The present position of the Organization Society is unsatisfactory. Scarcely half the local organizations are affiliated with it, and over those that are it possesses practically no powers of inspection or supervision. It does employ inspectors who are at the service of the affiliated societies, and provides auditors, free of charge, for the affiliated banks. Yet no local society is obliged

¹ Of the 369 societies mentioned in the detailed accounts for 1899, but 14 were entered as not working or in abeyance. In the 1904 accounts the numbers are 671 and 87 respectively, and in 1904 131 societies had to be dissolved.

to submit its account for audit or its business for inspection by an official of the Organization Society. In Germany the most important function of the *Verband*, or central body of a co-operative union, is to subject the whole conduct of the business of each society to a thorough examination, at least once in every two years. If the Irish associations would vest in the Organization Society the power and obligation of conducting a similar periodic investigation into their affairs, many mistakes would doubtless be rectified which now go unnoticed except in their results.

The financial position of the Organization Society also is anomalous. In 1904 its income amounted to £9,483, of which only £605 was contributed in affiliation fees, whereas £8,722 was derived from the subscriptions and donations of individuals. This situation is not only precarious, but it puts the co-operative societies in a peculiar light. Although no attempt seems to be made to separate the expenditures incurred in behalf of the affiliated societies from others in the accounts, it is safe to assume that the former amounted to considerably more than the £605 paid in by them. Surely, it would seem to be time that all money received from philanthropic individuals should be devoted to defraying the expenses of the further propagation of co-operative principles, and that the established societies should be called upon at least to pay their own way.

Whether the future of co-operation in Ireland will be as bright as the history of its earlier years promised depends on the extent to which the policy of further solidarity prevails over that of continued half-way measures. Co-operation has worked well, so far as it has been fairly tried. Wherever there are weaknesses in the movement, they can be traced to a failure to adopt the principle of co-operation in its entirety,—to an unwillingness on the part of members

or of societies to allow themselves to be bound firmly together in the pursuit of the common interest, as are the successful co-operators on the Continent. If those who control the movement can bring about its thorough re-organization on a firmer and more compact basis, it has great possibilities in Ireland.¹

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¹ In the second chapter of *Ireland in the New Century* Mr. Horace Plunkett maintains that co-operation will be "absolutely indispensable" to the successful establishment of a peasant proprietary in Ireland.

THE SOCIALIST ECONOMICS OF KARL MARX AND HIS FOLLOWERS.¹

I. THE THEORIES OF KARL MARX.

THE system of doctrines worked out by Marx is characterized by a certain boldness of conception and a great logical consistency. Taken in detail, the constituent elements of the system are neither novel nor iconoclastic, nor does Marx at any point claim to have discovered previously hidden facts or to have invented recondite formulations of facts already known; but the system as a whole has an air of originality and initiative such as is rarely met with among the sciences that deal with any phase of human culture. How much of this distinctive character the Marxian system owes to the personal traits of its creator is not easy to say, but what marks it off from all other systems of economic theory is not a matter of personal idiosyncrasy. It differs characteristically from all systems of theory that had preceded it, both in its premises and in its aims. The (hostile) critics of Marx have not sufficiently appreciated the radical character of his departure in both of these respects, and have, therefore, commonly lost themselves in a tangled scrutiny of supposedly abstruse details; whereas those writers who have been in sympathy with his teachings have too commonly been disciples bent on exegesis and on confirming their fellow-disciples in the faith.

Except as a whole and except in the light of its postulates and aims, the Marxian system is not only not tenable, but it is not even intelligible. A discussion of a given isolated

¹The substance of lectures before students in Harvard University in April, 1906.

feature of the system (such as the theory of value) from the point of view of classical economics (such as that offered by Böhm-Bawerk) is as futile as a discussion of solids in terms of two dimensions.

Neither as regards his postulates and preconceptions nor as regards the aim of his inquiry is Marx's position altogether single-minded one. In neither respect does his position come of a single line of antecedents. He is of no single school of philosophy, nor are his ideals those of any single group of speculators living before his time. For this reason he takes his place as an originator of a school of thought as well as the leader of a movement looking to a practical end.

As to the motives which drive him and the aspirations which guide him, in destructive criticism and in creative speculation alike, he is primarily a theoretician busied with the analysis of economic phenomena and their organization into a consistent and faithful system of scientific knowledge; but he is, at the same time, consistently and tenaciously alert to the bearing which each step in the progress of his theoretical work has upon the propaganda. His work has, therefore, an air of bias, such as belongs to an advocate's argument; but it is not, therefore, to be assumed, nor indeed to be credited, that his propagandist aims have in any substantial way deflected his inquiry or his speculations from the faithful pursuit of scientific truth. His socialistic bias may color his polemics, but his logical grasp is too neat and firm to admit of any bias, other than that of his metaphysical preconceptions, affecting his theoretical work.

There is no system of economic theory more logical than that of Marx. No member of the system, no single article of doctrine, is fairly to be understood, criticised, or defended except as an articulate member of the whole and in the light of the preconceptions and postulates which afford

the point of departure and the controlling norm of the whole. As regards these preconceptions and postulates, Marx draws on two distinct lines of antecedents,—the Materialistic Hegelianism and the English system of Natural Rights. By his earlier training he is an adept in the Hegelian method of speculation and inoculated with the metaphysics of development underlying the Hegelian system. By his later training he is an expert in the system of Natural Rights and Natural Liberty, ingrained in his ideals of life and held inviolate throughout. He does not take a critical attitude toward the underlying principles of Natural Rights. Even his Hegelian preconceptions of development never carry him the length of questioning the fundamental principles of that system. He is only more ruthlessly consistent in working out their content than his natural-rights antagonists in the liberal-classical school. His polemics run against the specific tenets of the liberal school, but they run wholly on the ground afforded by the premises of that school. The ideals of his propaganda are natural-rights ideals, but his theory of the working out of these ideals in the course of history rests on the Hegelian metaphysics of development, and his method of speculation and construction of theory is given by the Hegelian dialectic.

What first and most vividly centred interest on Marx and his speculations was his relation to the revolutionary socialistic movement; and it is those features of his doctrines which bear immediately on the propaganda that still continue to hold the attention of the greater number of his critics. Chief among these doctrines, in the apprehension of his critics, is the theory of value, with its corollaries: (a) the doctrines of the exploitation of labor by capital; and (b) the laborer's claim to the whole product of his labor. Avowedly, Marx traces his doctrine of labor

value to Ricardo, and through him to the classical economists.¹ The laborer's claim to the whole product of labor, which is pretty constantly implied, though not frequently avowed by Marx, he has in all probability taken from English writers of the early nineteenth century,² more particularly from William Thompson. These doctrines are, on their face, nothing but a development of the conceptions of natural rights which then pervaded English speculation and afforded the metaphysical ground of the liberal movement. The more formidable critics of the Marxian socialism have made much of these doctrinal elements that further the propaganda, and have, by laying the stress on these, diverted attention from other elements that are of more vital consequence to the system as a body of theory. Their exclusive interest in this side of "scientific socialism" has even led them to deny the Marxian system all substantial originality, and make it a (doubtfully legitimate) offshoot of English Liberalism and natural rights.³ But this is one-sided criticism. It may hold as against certain tenets of the so-called "scientific socialism," but it is not altogether to the point as regards the Marxian system of theory. Even the Marxian theory of value, surplus value, and exploitation, is not simply the doctrine of William Thompson, transcribed and sophisticated in a forbidding terminology, however great the superficial resemblance and however large Marx's unacknowledged debt to Thompson may be on these heads. For many details and for much of his animus Marx may be indebted to the Utilitarians; but, after all, his system of theory, taken as a whole, lies within the frontiers of neo-Hegelianism, and

¹ Cf. *Critique of Political Economy*, chap. i., "Notes on the History of the Theory of Commodities," pp. 56-73 (English translation, New York, 1904).

² See Menger, *Right to the Whole Produce of Labor*, sections iii.-v. and viii.-ix., and Foxwell's admirable Introduction to Menger.

³ See Menger and Foxwell, as above, and Schaeffle, *Quintessence of Socialism and The Impossibility of Social Democracy*.

even the details are worked out in accord with the pre-conceptions of that school of thought and have taken on the complexion that would properly belong to them on that ground. It is, therefore, not by an itemized scrutiny of the details of doctrine and by tracing their pedigree in detail that a fair conception of Marx and his contribution to economics may be reached, but rather by following him from his own point of departure out into the ramifications of his theory, and so overlooking the whole in the perspective which the lapse of time now affords us, but which he could not himself attain, since he was too near to his own work to see why he went about it as he did.

The comprehensive system of Marxism is comprised within the scheme of the Materialistic Conception of History.¹ This materialistic conception is essentially Hegelian,² although it belongs with the Hegelian Left, and its immediate affiliation is with Feuerbach, not with the direct line of Hegelian orthodoxy. The chief point of interest here, in identifying the materialistic conception with Hegelianism, is that this identification, throws it immediately and uncompromisingly into contrast with Darwinism and the post-Darwinian conceptions of evolution. Even if a plausible English pedigree should be worked out for this Materialistic Conception, or "Scientific Socialism," as has been attempted, it remains none the less true that the conception with which Marx went to his work was a transmuted framework of Hegelian dialectic.³

Roughly, Hegelian materialism differs from Hegelian orthodoxy by inverting the main logical sequence, not by

¹ See Engels, *The Development of Socialism from Utopia to Science*, especially section ii. and the opening paragraphs of section iii.; also the preface of *Zur Kritik der politischen Oekonomie*.

² See Engels, as above, and also his *Feuerbach: The Roots of Socialist Philosophy* (translation, Chicago, Kerr & Co., 1903).

³ See, e.g., Seligman, *The Economic Interpretation of History*, Part I.

discarding the logic or resorting to new tests of truth or finality. One might say, though perhaps with excessive crudity, that, where Hegel pronounces his dictum, *Das Denken ist das Sein*, the materialists, particularly Marx and Engels, would say *Das Sein macht das Denken*. But in both cases some sort of a creative primacy is assigned to one or the other member of the complex, and in neither case is the relation between the two members a causal relation. In the materialistic conception man's spiritual life—what man thinks—is a reflex of what he is in the material respect, very much in the same fashion as the orthodox Hegelian would make the material world a reflex of the spirit. In both the dominant norm of speculation and formulation of theory is the conception of movement, development, evolution, progress; and in both the movement is conceived necessarily to take place by the method of conflict or struggle. The movement is of the nature of progress,—gradual advance towards a goal, toward the realization in explicit form of all that is implicit in the substantial activity involved in the movement. The movement is, further, self-conditioned and self-acting: it is an unfolding by inner necessity. The struggle which constitutes the method of movement or evolution is, in the Hegelian system proper, the struggle of the spirit for self-realization by the process of the well-known three-phase dialectic. In the materialistic conception of history this dialectical movement becomes the class struggle of the Marxian system.

The class struggle is conceived to be "material," but the term "material" is in this connection used in a metaphorical sense. It does not mean mechanical or physical, or even physiological, but economic. It is material in the sense that it is a struggle between classes for the material means of life. "The materialistic conception of history proceeds on the principle that production and, next to

production, the exchange of its products is the groundwork of every social order.”¹ The social order takes its form through the class struggle, and the character of the class struggle at any given phase of the unfolding development of society is determined by “the prevailing mode of economic production and exchange.” The dialectic of the movement of social progress, therefore, moves on the spiritual plane of human desire and passion, not on the (literally) material plane of mechanical and physiological stress, on which the developmental process of brute creation unfolds itself. It is a sublimated materialism, sublimated by the dominating presence of the conscious human spirit; but it is conditioned by the material facts of the production of the means of life.² The ultimately active forces involved in the process of unfolding social life are (apparently) the material agencies engaged in the mechanics of production; but the dialectic of the process—the class struggle—runs its course only among and in terms of the secondary (epigenetic) forces of human consciousness engaged in the valuation of the material products of industry. A consistently materialistic conception, consistently adhering to a materialistic interpretation of the process of development as well as of the facts involved in the process, could scarcely avoid making its putative dialectic struggle a mere unconscious and irrelevant conflict of the brute material forces. This would have amounted to an interpretation in terms of opaque cause and effect, without recourse to the concept of a conscious class struggle, and it might have led to a concept of evolution similar to the unteleological Darwinian concept of natural selection. It could scarcely have led to the Marxian notion of a

¹ Engels, *Development of Socialism*, beginning of section iii.

² Cf., on this point, Max Adler, “Kausalität und Teleologie im Streite um die Wissenschaft” (included in *Marx-Studien*, edited by Adler and Helfferding, vol. i.), particularly section xi.; cf. also Ludwig Stein, *Die soziale Frage im Lichte der Philosophie*, whom Adler criticises and claims to have refuted.

conscious class struggle as the one necessary method of social progress, though it might conceivably, by the aid of empirical generalization, have led to a scheme of social process in which a class struggle would be included as an incidental though perhaps highly efficient factor.¹ It would have led, as Darwinism has, to a concept of a process of cumulative change in social structure and function; but this process, being essentially a cumulative sequence of causation, opaque and unteleological, could not, without an infusion of pious fancy by the speculator, be asserted to involve progress as distinct from retrogression or to tend to a "realization" or "self-realization" of the human spirit or of anything else. Neither could it conceivably be asserted to lead up to a final term, a goal to which all lines of the process should converge and beyond which the process would not go, such as the assumed goal of the Marxian process of class struggle which is conceived to cease in the classless economic structure of the socialistic final term. In Darwinianism there is no such final or perfect term, and no definitive equilibrium.

The disparity between Marxism and Darwinism, as well as the disparity within the Marxian system between the range of material facts that are conceived to be the fundamental forces of the process, on the one hand, and the range of spiritual facts within which the dialectic movement proceeds,—this disparity is shown in the character assigned the class struggle by Marx and Engels. The struggle is asserted to be a conscious one, and proceeds on a recognition by the competing classes of their mutually incompatible interests with regard to the material means of life. The class struggle proceeds on motives of interest, and a recognition of class interest can, of course, be reached only by reflection on the facts of the case. There is, therefore, not even a direct causal connection between the material forces in the case and the choice of a given in-

¹ Cf. Adler as above.

terested line of conduct. The attitude of the interested party does not result from the material forces so immediately as to place it within the relation of direct cause and effect, nor even with such a degree of intimacy as to admit of its being classed as a tropismatic, or even instinctive, response to the impact of the material force in question. The sequence of reflection, and the consequent choice of sides to a quarrel, run entirely alongside of the range of material facts concerned.

A further characteristic of the doctrine of class struggle requires mention. While the concept is not Darwinian, it is also not legitimately Hegelian, whether of the Right or the Left. It is of a utilitarian origin and of English pedigree, and it belongs to Marx by virtue of his having borrowed its elements from the system of self-interest. It is in fact a piece of hedonism, and is related to Bentham rather than to Hegel. It proceeds on the grounds of the hedonistic calculus, which is equally foreign to the Hegelian notion of an unfolding process and to the post-Darwinian notions of cumulative causation. As regards the tenability of the doctrine, apart from the question of its derivation and its compatibility with the neo-Hegelian postulates, it is to be added that it is quite out of harmony with the later results of psychological inquiry,—just as is true of the use made of the hedonistic calculus by the classical (Austrian) economics.

Within the domain covered by the materialistic conception, that is to say within the domain of unfolding human culture, which is the field of Marxian speculation at large, Marx has more particularly devoted his efforts to an analysis and theoretical formulation of the present situation,—the current phase of the process, the capitalistic system. And, since the prevailing mode of the production of goods determines the institutional, intellectual, and spiritual life

of the epoch, by determining the form and method of the current class struggle, the discussion necessarily begins with the theory of "capitalistic production," or production as carried on under the capitalistic system.¹ Under the capitalistic system, that is to say under the system of modern business traffic, production is a production of commodities, merchantable goods, with a view to the price to be obtained for them in the market. The great fact on which all industry under this system hinges is the price of marketable goods. Therefore it is at this point that Marx strikes into the system of capitalistic production, and therefore the theory of value becomes the dominant feature of his economics and the point of departure for the whole analysis, in all its voluminous ramifications.²

It is scarcely worth while to question what serves as the beginning of wisdom in the current criticisms of Marx; namely, that he offers no adequate proof of his labor-value theory.³ It is even safe to go farther, and say that

¹ It may be noted, by way of caution to readers familiar with the terms only as employed by the classical (English and Austrian) economists, that in Marxian usage "capitalistic production" means production of goods for the market by hired labor under the direction of employers who own (or control) the means of production and are engaged in industry for the sake of a profit. "Capital" is wealth (primarily funds) so employed. In these and other related points of terminological usage Marx is, of course, much more closely in touch with colloquial usage than those economists of the classical line who make capital signify "the products of past industry used as aids to further production." With Marx "Capitalism" implies certain relations of ownership, no less than the "productive use" which is alone insisted on by so many later economists in defining the term.

² In the sense that the theory of value affords the point of departure and the fundamental concepts out of which the further theory of the workings of capitalism is constructed,—in this sense, and in this sense only, is the theory of value the central doctrine and the critical tenet of Marxism. It does not follow that the Marxist doctrine of an irresistible drift towards a socialistic consummation hangs on the defensibility of the labor-value theory, nor even that the general structure of the Marxist economics would collapse if translated into other terms than those of this doctrine of labor value. Cf. Böhm-Bawerk, *Karl Marx and the Cause of his System*; and, on the other hand, Frans Oppenheimer, *Das Grundgesetz der Marx'schen Gesellschaftslehre*, and Rudolf Goldscheid, *Verwendungs- oder Meliorationstheorie*.

³ Cf., e.g., Böhm-Bawerk, as above; Georg Adler, *Grundlagen der Karl Marx'schen Kritik*.

he offers no proof of it. The feint which occupies the opening paragraphs of the *Kapital* and the corresponding passages of *Zur Kritik*, etc., is not to be taken seriously as an attempt to prove his position on this head by the ordinary recourse to argument. It is rather a self-satisfied superior's playful mystification of those readers (critics) whose limited powers do not enable them to see that his proposition is self-evident. Taken on the Hegelian (neo-Hegelian) ground, and seen in the light of the general materialistic conception, the proposition that value = labor-cost is self-evident, not to say tautological. Seen in any other light, it has no particular force.

In the Hegelian scheme of things the only substantial reality is the unfolding life of the spirit. In the neo-Hegelian scheme, as embodied in the materialistic conception, this reality is translated into terms of the unfolding (material) life of man in society.¹ In so far as the goods are products of industry, they are the output of this unfolding life of man, a material residue embodying a given fraction of this forceful life process. In this life process lies all substantial reality, and all finally valid relations of quantivalence between the products of this life process must run in its terms. The life process, which, when it takes the specific form of an expenditure of labor power, goes to produce goods, is a process of material forces, the spiritual or mental features of the life process and of labor being only its insubstantial reflex. It is consequently only in the material changes wrought by this expenditure of labor power that the metaphysical substance of life—labor power—can be embodied; but in these changes of material

¹In much the same way, and with an analogous effect on their theoretical work, in the preconceptions of the classical (including the Austrian) economists, the balance of pleasure and pain is taken to be the ultimate reality in terms of which all economic theory must be stated and to terms of which all phenomena should finally be reduced in any definitive analysis of economic life. It is not the present purpose to inquire whether the one of these uncritical assumptions is in any degree more meritorious or more serviceable than the other.

fact it cannot but be embodied, since these are the end to which it is directed.

This balance between goods in respect of their magnitude as output of human labor holds good indefeasibly, in point of the metaphysical reality of the life process, whatever superficial (phenomenal) variations from this norm may occur in men's dealings with the goods under the stress of the strategy of self-interest. Such is the value of the goods in reality; they are equivalents of one another in the proportion in which they partake of this substantial quality, although their true ratio of equivalence may never come to an adequate expression in the transactions involved in the distribution of the goods. This real or true value of the goods is a fact of production, and holds true under all systems and methods of production, whereas the exchange value (the "phenomenal form" of the real value) is a fact of distribution, and expresses the real value more or less adequately according as the scheme of distribution in force at the given time conforms more or less closely to the equities given by production. If the output of industry were distributed to the productive agents strictly in proportion to their shares in production, the exchange value of the goods would be presumed to conform to their real value. But, under the current, capitalistic system, distribution is not in any sensible degree based on the equities of production, and the exchange value of goods under this system can therefore express their real value only with a very rough, and in the main fortuitous, approximation. Under a socialistic régime, where the laborer would get the full product of his labor, or where the whole system of ownership, and consequently the system of distribution, would lapse, values would reach a true expression, if any.

Under the capitalistic system the determination of exchange value is a matter of competitive profit-making, and

exchange values therefore depart erratically and incontinently from the proportions that would legitimately be given them by the real values whose only expression they are. Marx's critics commonly identify the concept of "value" with that of "exchange value,"¹ and show that the theory of "value" does not square with the run of the facts of price under the existing system of distribution, piously hoping thereby to have refuted the Marxian doctrine; whereas, of course, they have for the most part not touched it. The misapprehension of the critics may be due to a (possibly intentional) oracular obscurity on the part of Marx. Whether by his fault or their own, their refutations have hitherto been quite inconclusive. Marx's severest stricture on the iniquities of the capitalistic system is that contained by implication in his development of the manner in which actual exchange value of goods systematically diverges from their real (labor-cost) value. Herein, indeed, lies not only the inherent iniquity of the existing system, but also its fateful infirmity, according to Marx.

The theory of value, then, is *contained in* the main postulates of the Marxian system rather than derived from them. Marx identifies this doctrine, in its elements, with the labor-value theory of Ricardo,² but the relationship between the two is that of a superficial coincidence in their main propositions rather than a substantial identity of theoretic contents. In Ricardo's theory the source and measure of value is sought in the effort and sacrifice undergone by the producer, consistently, on the whole, with the Benthamite-utilitarian position to which Ricardo somewhat

¹ Böhm-Bawerk, *Capital and Interest*, Book VI., chap. iii.; also *Karl Marx and the Close of his System*, particularly chap. iv.; Adler, *Grundlagen*, chaps. ii. and iii.

² Cf. *Kapital*, vol. i., chap. xv. p. 486 (4th ed.). See also notes 9 and 16 to chap. i. of the same volume, where Marx discusses the labor-value doctrines of Adam Smith and an earlier (anonymous) English writer and compares them with his own. Similar comparisons with the early—classical—value theories recur from time to time in the later portions of *Kapital*.

loosely and uncritically adhered. The decisive fact about labor, that quality by virtue of which it is assumed to be the final term in the theory of production, is its irksomeness. Such is of course not the case in the labor-value theory of Marx, to whom the question of the irksomeness of labor is quite irrelevant, so far as regards the relation between labor and production. The substantial diversity or incompatibility of the two theories shows itself directly when each is employed by its creator in the further analysis of economic phenomena. Since with Ricardo the crucial point is the degree of irksomeness of labor, which serves as a measure both of the labor expended and the value produced, and since in Ricardo's utilitarian philosophy there is no more vital fact underlying this irksomeness, therefore no surplus-value theory follows from the main position. The productiveness of labor is not cumulative, in its own working; and the Ricardian economics goes on to seek the cumulative productiveness of industry in the functioning of the products of labor when employed in further production and in the irksomeness of the capitalist's abstinence. From which duly follows the general position of classical economics on the theory of production.

With Marx, on the other hand, the labor power expended in production being itself a product and having a substantial value corresponding to its own labor cost, the value of the labor power expended and the value of the product created by its expenditure need not be the same. They are not the same, by supposition, as they would be in any hedonistic interpretation of the facts. Hence a discrepancy arises between the value of the labor power expended in production and the value of the product created, and this discrepancy is covered by the concept of surplus value. Under the capitalistic system, wages being the value (price) of the labor power consumed in industry, it follows that

the surplus product of their labor cannot go to the laborers, but becomes the profits of capital and the source of its accumulation and increase. From the fact that wages are measured by the value of labor power rather than by the (greater) value of the product of labor, it follows also that the laborers are unable to buy the whole product of their labor, and so that the capitalists are unable to sell the whole product of industry continuously at its full value, whence arise difficulties of the gravest nature in the capitalistic system, in the way of overproduction and the like.

But the gravest outcome of this systematic discrepancy between the value of labor power and the value of its product is the accumulation of capital out of unpaid labor and the effect of this accumulation on the laboring population. The law of accumulation, with its corollary, the doctrine of the industrial reserve army, is the final term and the objective point of Marx's theory of capitalist production, just as the theory of labor value is his point of departure.¹ While the theory of value and surplus value are Marx's explanation of the possibility of existence of the capitalistic system, the law of the accumulation of capital is his exposition of the causes which must lead to the collapse of that system and of the manner in which the collapse will come. And since Marx is, always and everywhere, a socialist agitator as well as a theoretical economist, it may be said without hesitation that the law of accumulation is the climax of his great work, from whatever point of view it is looked at, whether as an economic theorem or as a tenet of socialistic doctrine.

The law of capitalistic accumulation may be para-

¹ Oppenheimer (*Das Grundgesetz der Marx'schen Gesellschaftslehre*) is right in making the theory of accumulation the central element in the doctrines of Marxist socialism, but it does not follow, as Oppenheimer contends, that this doctrine is the keystone of Marx's economic theories. It follows logically from the theory of surplus value, as indicated above, and rests on that theory in such a way that it would fail (in the form in which it is held by Marx) with the failure of the doctrine of surplus value.

phrased as follows:¹ Wages being the (approximately exact) value of the labor power bought in the wage contract; the price of the product being the (similarly approximate) value of the goods produced; and since the value of the product exceeds that of the labor power by a given amount (surplus value), which by force of the wage contract passes into the possession of the capitalist and is by him in part laid by as savings and added to the capital already in hand, it follows (a) that, other things equal, the larger the surplus value, the more rapid the increase of capital; and, also (b), that the greater the increase of capital relatively to the labor force employed, the more productive the labor employed and the larger the surplus product available for accumulation. The process of accumulation, therefore, is evidently a cumulative one; and, also evidently, the increase added to capital is an unearned increment drawn from the unpaid surplus product of labor.

But with an appreciable increase of the aggregate capital a change takes place in its technological composition, whereby the "constant" capital (equipment and raw materials) increases disproportionately as compared with the "variable" capital (wages fund). "Labor-saving devices" are used to a greater extent than before, and labor is saved. A larger proportion of the expenses of production goes for the purchase of equipment and raw materials, and a smaller proportion—though perhaps an absolutely increased amount—goes for the purchase of labor power. Less labor is needed relatively to the aggregate capital employed as well as relatively to the quantity of goods produced. Hence some portion of the increasing labor supply will not be wanted, and an "industrial reserve army," a "surplus labor population," an army of unemployed, comes into existence. This reserve

¹ See *Kapital*, vol. I., chap. xxiii.

grows relatively larger as the accumulation of capital proceeds and as technological improvements consequently gain ground; so that there result two divergent cumulative changes in the situation,—antagonistic, but due to the same set of forces and, therefore, inseparable: capital increases, and the number of unemployed laborers (relatively) increases also.

This divergence between the amount of capital and output, on the one hand, and the amount received by laborers as wages, on the other hand, has an incidental consequence of some importance. The purchasing power of the laborers, represented by their wages, being the largest part of the demand for consumable goods, and being at the same time, in the nature of the case, progressively less adequate for the purchase of the product, represented by the price of the goods produced, it follows that the market is progressively more subject to glut from overproduction, and hence to commercial crises and depression. It has been argued, as if it were a direct inference from Marx's position, that this maladjustment between production and markets, due to the laborer not getting the full product of his labor, leads directly to the breakdown of the capitalistic system, and so by its own force will bring on the socialistic consummation. Such is not Marx's position, however, although crises and depression play an important part in the course of development that is to lead up to socialism. In Marx's theory, socialism is to come by way of a conscious class movement on the part of the propertyless laborers, who will act advisedly on their own interest and force the revolutionary movement for their own gain. But crises and depression will have a large share in bringing the laborers to a frame of mind suitable for such a move.

Given a growing aggregate capital, as indicated above, and a concomitant reserve of unemployed laborers growing

at a still higher rate, as is involved in Marx's position, this body of unemployed labor can be, and will be, used by the capitalists to depress wages, in order to increase profits. Logically, it follows that, the farther and faster capital accumulates, the larger will be the reserve of unemployed, both absolutely and relatively to the work to be done, and the more severe will be the pressure acting to reduce wages and lower the standard of living, and the deeper will be the degradation and misery of the working class and the more precipitately will their condition decline to a still lower depth. Every period of depression, with its increased body of unemployed labor seeking work, will act to hasten and accentuate the depression of wages, until there is no warrant even for holding that wages will, on an average, be kept up to the subsistence minimum.¹ Marx, indeed, is explicit to the effect that such will be the case,—that wages will decline below the subsistence minimum; and he cites English conditions of child labor, misery, and degeneration to substantiate his views.² When this has gone far enough, when capitalist production comes near enough to occupying the whole field of industry and has depressed the condition of its laborers sufficiently to make them an effective majority of the community with nothing to lose, then, having taken advice together, they will move, by legal or extra-legal means, by absorbing the state or by subverting it, to establish the social revolution.

Socialism is to come through class antagonism due to the absence of all property interests from the laboring class, coupled with a generally prevalent misery so profound as to involve some degree of physical degeneration. This misery is to be brought about by the heightened pro-

¹ The "subsistence minimum" is here taken in the sense used by Marx and the classical economists, as meaning what is necessary to keep up the supply of labor at its current rate of efficiency.

² See *Kapital*, vol. i., chap. xxiii., sections 4 and 5.

ductivity of labor due to an increased accumulation of capital and large improvements in the industrial arts; which in turn is caused by the fact that under a system of private enterprise with hired labor the laborer does not get the whole product of his labor; which, again, is only saying in other words that private ownership of capital goods enables the capitalist to appropriate and accumulate the surplus product of labor. As to what the régime is to be which the social revolution will bring in, Marx has nothing particular to say beyond the general thesis that there will be no private ownership, at least not of the means of production.

Such are the outlines of the Marxian system of socialism. In all that has been said so far no recourse is had to the second and third volumes of *Kapital*. Nor is it necessary to resort to these two volumes for the general theory of socialism. They add nothing essential, although many of the details of the processes concerned in the working out of the capitalist scheme are treated with greater fulness, and the analysis is carried out with great consistency and with admirable results. For economic theory at large these further two volumes are important enough, but an inquiry into their contents in that connection is not called for here.

Nothing much need be said as to the tenability of this theory. In its essentials, or at least in its characteristic elements, it has for the most part been given up by latter-day socialist writers. The number of those who hold to it without essential deviation is growing gradually smaller. Such is necessarily the case, and for more than one reason. The facts are not bearing it out on certain critical points, such as the doctrine of increasing misery; and the Hegelian philosophical postulates, without which the Marxism of Marx is groundless, are for the most part forgotten by

the dogmatists of to-day. Darwinism has largely supplanted Hegelianism in their habits of thought.

The particular point at which the theory is most fragile, considered simply as a theory of social growth, is its implied doctrine of population,—implied in the doctrine of a growing reserve of unemployed workmen. The doctrine of the reserve of unemployed labor involves as a postulate that population will increase anyway, without reference to current or prospective means of life. The empirical facts give at least a very persuasive apparent support to the view expressed by Marx, that misery is, or has hitherto been, no hindrance to the propagation of the race; but they afford no conclusive evidence in support of a thesis to the effect that the number of laborers must increase independently of an increase of the means of life. No one since Darwin would have the hardihood to say that the increase of the human species is not conditioned by the means of living.

But all that does not really touch Marx's position. To Marx, the neo-Hegelian, history, including the economic development, is the life-history of the human species; and the main fact in this life-history, particularly in the economic aspect of it, is the growing volume of human life. This, in a manner of speaking, is the base-line of the whole analysis of the process of economic life, including the phase of capitalist production with the rest. The growth of population is the first principle, the most substantial, most material factor in this process of economic life, so long as it is a process of growth, of unfolding, of exfoliation, and not a phase of decrepitude and decay. Had Marx found that his analysis led him to a view adverse to this position, he would logically have held that the capitalist system is the mortal agony of the race and the manner of its taking off. Such a conclusion is precluded by his Hegelian point of departure, according to which the goal of the

life-history of the race in a large way controls the course of that life-history in all its phases, including the phase of capitalism. This goal or end, which controls the process of human development, is the complete realization of life in all its fulness, and the realization is to be reached by a process analogous to the three-phase dialectic, of thesis, antithesis, and synthesis, into which scheme the capitalist system, with its overflowing measure of misery and degradation, fits as the last and most dreadful phase of antithesis. Marx, as a Hegelian,—that is to say, a romantic philosopher,—is necessarily an optimist, and the evil (antithetical element) in life is to him a logically necessary evil, as the antithesis is a necessary phase of the dialectic; and it is a means to the consummation, as the antithesis is a means to the synthesis.

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THE RELATION OF MARGINAL RENTS TO PRICE.

At the outset it must be noticed that the term "marginal land" may refer to land on the margin in each and every separate industry, or to the land on the margin in relation to all industry,—to the entire network of industries in the country or in the world. The first may be termed a relative margin, the latter, an absolute extensive margin. There is, for example, marginal land used for building lots, and marginal land used for raising wheat; but in both cases, under ordinary conditions, the land, if not used for building sites or wheat-growing respectively, would be utilized in some other manner. In other words, these lands have, as a rule, one or more optional uses. But land may be, and indeed actually is, in existence which, if not utilized as it is at present, would lie idle, or it is at the present time just yielding a return equal to the necessary return to the labor and capital employed upon the land. If land was rigidly specialized,—that is, if each kind of land was capable of being employed in one and only one occupation, and an abundance of all necessary varieties existed,—each use of land would have an absolute margin, but relative margins would be non-existent. On the other hand, if land in any one or in all industries were not sufficiently abundant to satisfy the demand for the particular products or product which the particular quality of land was fitted to produce, a surplus would arise even on the poorest land, which would be called an absolute extensive marginal rent. Extensive marginal rents are, then, of two kinds,—relative and absolute. The latter is, however, as will be shown later, in reality only a special variety of the former, and is theoretical rather than actual.

Turning from the classification of extensive margins to that of intensive, two varieties may be distinguished,—normal and abnormal. The normal intensive margin is the

margin reached in competitive enterprises. In such enterprises, capital and labor are added, increment by increment, to a given area of land, until a point is reached where the product yields merely interest and wages,—the expenses of production. On the contrary, in enterprises involving monopoly gains of any sort, no matter how they may arise, the normal flow of capital and labor is obstructed, and both are diverted into new channels. The return to the marginal unit of labor and of capital on a specific area of land is greater than in a purely competitive business. The intensive margin is not the normal one for the enterprise in question. A rent arises in such a case which may be designated an absolute intensive marginal rent. In one sense of the word, as long as abnormal intensive margins exist, all intensive margins are abnormal. Because, if less than the normal amount of capital and labor is employed in any particular class of industries, more than the normal amount must be diverted into other industries, and the true normal margin for the latter is depressed.

It is our problem to discuss the various marginal rents and their relation to price. In a theory of price must these three rents be considered as essentially different from differential rents? But what is meant by the question, Does rent enter price?¹ One important criterion has been held to be, Would prices be lower if rents were remitted? Can this be accepted as a true criterion? Prices are fixed by conditions of supply and demand, and may be affected by forces which change the intensity or direction of demand or by influences which limit or increase supply. A differential rent is, from one point of view, the measure of comparative efficiency. A specific increase in differential rents may indicate higher, lower, or stationary prices. It may mean the resort to a lower margin of cultivation or it may indicate increased production on the more productive or advantageously situated areas of land. While a universal increase of differential rents would signify a lower margin

¹ See article by Professor T. N. Carver, *Quarterly Journal of Economics*, vol. xv. pp. 599, 600.

of production, and consequently higher cost of production, specific changes in differential rents are not significant. If all workers would remit their wages, other things remaining the same, prices would be unchanged. If all capitalists would refuse to accept interest, and no change take place in the conditions of supply and demand, prices must certainly remain at the same level. However, are we prepared to say that wages and interest do not enter or affect price in a different manner than differential rents? If we posit that demand and supply remain unchanged, certainly remission of rent, or interest, or wages, does not affect price. The hypothesis of the remission of rent or of wages is, however, scarcely permissible, because such remission must inevitably change the existing conditions of demand and supply. Therefore, the real questions before us are, Does or does not marginal rent affect price as does differential rent? or, Do marginal rents affect price in a manner similar to wages or interest?

Before proceeding further, it may be advisable to consider briefly the positions taken by some of the leading economists who have given attention to this topic, and to attempt to roughly classify them. Two general classes may be noticed, and under each of the two classes two sub-classes may be recognized.

1. The economists who distinguish marginal from differential rents as to their effect upon price. These writers measure from an extensive margin:—

(a) Writers who retain the term "rent," such as Mill, Hobson, and Patten. Mill writes: "Rent is not an element in the cost of production of the commodity which yields it, except in the case (rather conceivable than actually existing) in which it results from and represents a scarcity value. But, when land capable of yielding rent in agriculture is applied to some other purpose, the rent which it would have yielded is an element in the cost of production of the commodity which it is employed to produce."¹ According to Mill, then, there

¹ Mill, *Principles* (3-6-1-ix.).

may be differential, relative marginal, and absolute marginal rent. The latter two forms, when existing, affect price. Absolute marginal rent is, however, held to be theoretical rather than actual. The position of Mr. Hobson¹ and of Professor Patten² are practically the same as that of Mill.

(b) Writers who use a new term for marginal rent. Macfarlane³ declares that the so-called marginal rent, or scarcity rent, is not rent at all, but a surplus. He emphatically insists that the term "rent" must be confined strictly to a differential return which never enters price. According to this economist, any surplus, whether arising from land, labor, or capital, which determines price, is not a rent. He differs from the above-mentioned writers merely in the matter of terminology.

2. As to the determination of price, marginal rent is not essentially different from differential rent. (a) Marginal rent does not directly enter price. Marshall, Bullock, and Hollander should be included under this sub-head. Marshall⁴ recognizes what has been termed "relative marginal rent," but urges that it does not directly affect price. He admits, however, that it does indirectly affect price. Bullock's position is essentially the same.⁵ Hollander is more explicit in his denial that marginal rent enters price. Such a view, in his opinion, is due entirely to the omission of one important factor; namely, the existence of an intensive margin of cultivation. "The rent of any particular price of land may be measured indifferently from the extensive or from the intensive margin."⁶ Hobson attacks the dose argument upon which Hollander and Marshall base their contentions, and points out that the dose argument can be applied as well to capital and to labor. He rejects the application of the law of rent to the intensive cultivation

¹ Hobson, *Economics of Distribution*, pp. 120, 121, 300.

² Patten, *Premises of Political Economy*, p. 22.

³ Macfarlane, *Value and Distribution*, pp. 130-133.

⁴ Marshall, *Economics*, pp. 459, 460.

⁵ *Introduction to Study of Economics*, pp. 399, 400.

⁶ *Quarterly Journal of Economics*, vol. ix. pp. 178, 179.

of land or to the use of a single factor in production, and falls back upon the extensive margin as the "sole legitimate application of the Law of Rent." Each use of land, except the lowest, will yield a marginal rent. Differentials in that particular industry will be measured from this margin.¹ Mr. A. M. Hyde,² who maintains that marginal rents do not enter price, refers only to extensive marginal rents, and maintains that the intensive margin is the same in all businesses,—a view which is inadequate, in that it overlooks the presence of economic friction and monopoly. The crux of the entire problem lies in the fact that in all enterprises which possess a measure of monopoly power, or peculiar advantages of any sort, the intensive margin is not carried down as far as in other industries.

(b) All rents enter price. Clark³ and Fetter⁴ argue that all rents, marginal or differential, play a direct part in determining price. Clark uses the dose argument, which Hobson calls "fallacious," to prove his point.

We have thus before us a number of apparently conflicting and divergent views as to the relations of marginal rent to price. Can these views be harmonised in some measure? What conclusions can be drawn from an analysis of the problem?

Let us first look upon industry as a whole over a wide area, presupposing abundant land of widely, but gradually, varying character, valuable for one or more optional uses, and subject at a given time to the law of diminishing returns.

Fig. 1 is an ideal diagram representing such a condition. While, of course, there is actually no such regular and smooth gradation in the qualities of land as the diagram presents, we may accept this curve for the purpose of this discussion without serious error, remembering the basic hypothesis. At *I* a given amount of labor and capital will produce a

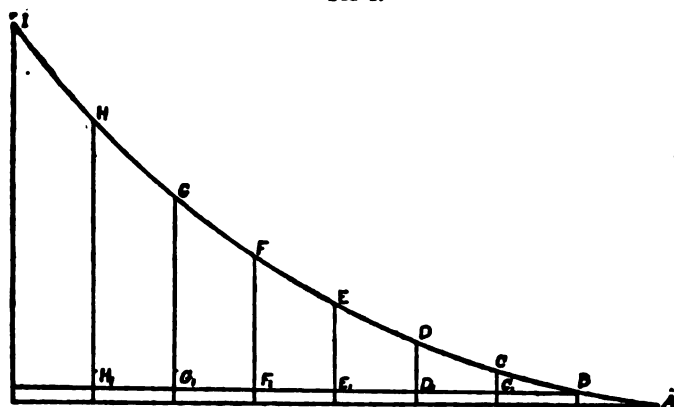
¹ *Economics of Distribution*, pp. 148, 149.

² *Journal of Political Economy*, vol. vi. pp. 369-379.

³ *Distribution of Wealth*, p. 254.

⁴ *Quarterly Journal of Economics*, vol. xv. p. 422.

FIG 1.



- A. Final absolute margin.
- B. Present absolute margin (grazing, etc., margin).
- C. Agricultural margin.
- D. Gardening margin.
- E. Manufacturing margin.
- F. Residence (city) margin.
- G. Commercial (stores) margin.
- H. Commercial (office) margin.

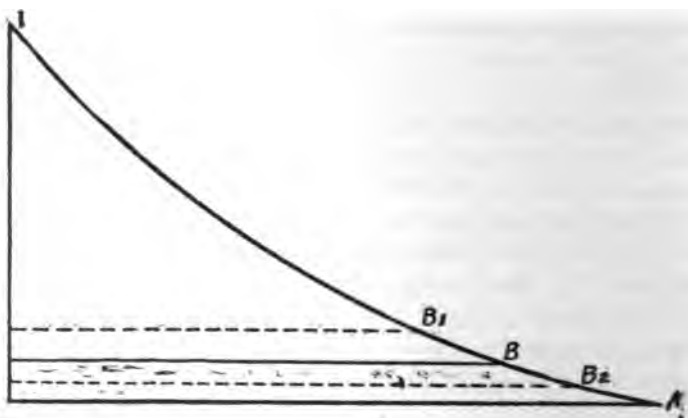
maximum return. *B* is the present actual margin of land utilization. This margin is, of course, subject to variation with changing conditions of demand and supply. *A* is the final absolute margin of utilization, imaginary or real. Here land is absolutely valueless for any purpose. In mathematical terms, an infinite amount of labor and capital would be required to produce a finite product. *HH₁*, *GG₁*, and so on, are the relative marginal rents in the different industries. Varying slightly the hypothesis, if there is no land beyond *B*, and if the demand is increased until land is not sufficiently abundant, an absolute extensive marginal rent would arise, and the other, or the relative, marginal rents would be increased by this amount.

Without going into the problem at this point, we may at least ask the following questions: Where is the line of demarcation to be drawn, for example, between agriculture and market gardening? And why should any line be drawn when discussing the theory of rent? Is not *CC₁* the margin for both agriculture and market gardening? If not, why

not have innumerable relative margins, one for every variation in the methods employed or the crop grown? If we narrow the classification and confine ourselves to oat land, for instance, must we not take into consideration the possibility of rotation of crops, even without changed conditions as to demand and supply? It would seem that the question of a relative margin is practically not a simple one. Again, we may ask in regard to manufacture, Should or should not the land utilized for the sites of dwellings of employees be considered as land used for purposes of manufacture? Or, in other words, Is not the land used for the dwelling-sites of the workmen and that used for the factory itself all in one category? Should not both be measured from the same relative margin?

Attacking the problem directly, let us make the hypothesis that land is rigidly specialized, absolutely immobile, and abundant in each occupation. As many diagrams, similar to Fig. 1, may be drawn as there are different occupations or industries. Let Fig. 2 represent the curve for wheat land absolutely immobile and abundant. That is, there is supposed to be an abundant quantity of land of gradually varying grades of desirability which can be used for wheat, but for no other purpose. B is the margin of cultivation, —no rent land. Other more desirable pieces of land will

FIG. 2.



receive differential returns. Differential rents are present, but not marginal rents.

Making similar assumptions of different grades or powers of productivity upon any given piece of land, so that we proceed from higher towards the lower we conclude that an increasing amount of capital and labor is required in order to yield equal returns, and may, therefore, draw a curve of intensive cultivation on a given area, similar to Fig. 2.

Returning to the consideration of the extensive margin, if land is specialized as before, but the supply for any specific purpose limited and the demand for the products or services of the land firm, the marginal land will receive a scarcity, or marginal, rent analogous to the monopoly rent due to ownership of a patent, or to that caused by the restriction of membership in a trade union controlling a certain industry. But the intensive margin would still extend to B (Fig. 2).

If the original problem is again modified by introducing competition from below (that of grazing, for example), the extensive margin for wheat may be pushed up to B_1 while the margin of the grazing land will extend below B to B_2 . As a result, the land still devoted to wheat will, under normal conditions, be cultivated more intensively. Now the curve of intensive cultivation of wheat will extend below that of the extensive curve; and, if capital and labor are absolutely mobile, it will extend to B_2 . Competition from below would, then, raise the extensive margin, changing it from an absolute to a relative margin, and in so doing would cause the intensive margin to be lowered if the same amount of produce is demanded, since the land between B_1 and B_2 is now utilized for grazing. The additional expense at the intensive margin is measured by the vertical line between the two horizontal lines passing through B and B_2 .

If competition presses only from above (market gardening, for example), the margin will be lowered both intensively and extensively; but the two curves will coincide. Price will be raised as a result of increased expenses of production.

In the third case, optional uses from both the higher and

lower class tend to compress the limits for wheat-growing, and lead to an extension of the intensive margin. In all uses except the lowest a relative margin, not coincident with the intensive margin, replaces the absolute extensive margin.

If capital and labor were perfectly mobile,—flowing immediately and without friction from one place or occupation to another,—and land was mobile, abundant, and of different grades of desirability, it seems reasonable to argue that returns to capital and labor on the margin, whether intensive or extensive, will be equal in all occupations or uses. All land rents would, then, be differential, measured indifferently from an extensive or an intensive margin. Other forms of rent or surplus would disappear. In short, Hobson's land-labor-capital margin would be realized. Under this hypothesis Hollander's conception of the relation of rent to price is correct.

Let us pause in order to summarize our conclusions. Remembering that our fundamental hypothesis is that labor and capital are mobile, we may classify our results under four headings:—

(1) Land specialized and abundant. Differential, but not marginal rents arise.

(2) Land specialized and scarce. Differential and many absolute extensive marginal rents arise.

(3) Land mobile and abundant. Differential, but no absolute extensive marginal rents arise.

(4) Land mobile and scarce. Differential and one absolute extensive marginal rents arise.

Propositions 1 and 2 refer to extensive margins. Proposition 3 refers to an intensive margin, except in the case of the lowest form of land use. Proposition 4 refers to both margins.

The absolute extensive margin is, under the hypothesis of mobility of labor and capital, only a special and unusual form of a relative margin. Instead of land beyond the extensive margin in a particular industry devoted to other uses there is no land existing beyond it. A relative margin is a shifting one: an absolute extensive margin, if in exist-

ence, would be practically fixed and unchangeable. But, if economic friction and monopoly were eliminated, the intensive margin of cultivation would be everywhere extended to the same point, whether the particular industry has a relative or an absolute extensive margin. The essential consideration appertains to the intensive, not to the extensive margin. Therefore, both relative and absolute extensive marginal rents have no significance in a theory of price, if economic friction be eliminated.¹

As a matter of fact, land is never rigidly specialized or absolutely mobile. Partial specialization will cause the appearance of many permanent or temporary, absolute intensive marginal rents. On the other hand, if one of the other factors in production—labor or capital—is able to obtain a monopoly or scarcity gain, the return to that factor will be fixed at the highest net return. That is, increments of this factor will not be added until a normal marginal return is reached,—the marginal return for a competitive business. The actual marginal unit of a factor which possesses an element of monopolistic power ordinarily receives a higher return than does a marginal unit of the same factor in a strictly competitive business. Land employed in businesses which are of a monopolistic nature will ordinarily have an intensive margin which is actually higher than that of land employed in other enterprises. "Were competition free, production would always be carried out to a point where the total product would compensate each increment of capital and labor (of equal efficiency) with exactly equal values. These values would come down to the expense of production, and there would be no surplus above expense of production. But it is because some monopoly element has power to limit production before the point is reached where average value equals expense that the value of the product allows a surplus above its expense."²

Another view of the problem may also be presented. If

¹ Up to this point the conclusions are similar to those of Mr. Hyde, although reached by a different method of approach.

² Commons, *Distribution of Wealth*, p. 155.

"consumption becomes more static and less varied,—the surplus of the consumers is increased," and rent and cost are increased. "Few wants mean high rents and large consumer's surplus."¹ The other side of the shield is now turned towards us. We are viewing the problem from the side of consumption. Few wants give little opportunity for change from one crop to another, or to put land to its best uses. Land must consequently be, to a considerable extent, uneconomically specialized, and the few wants are necessarily intense. The productive value of the land is lessened, and the absolute extensive margin of cultivation is lowered and abnormal intensive margins appear. Multiplicity of demand tends to produce the same effect as mobility of land; namely, to reduce absolute intensive marginal rents and to raise the extensive margin of cultivation. Differential rents signify differences in efficiency, but absolute intensive marginal rents arise only where there is restriction of supply and obstruction to the normal flow of land, labor, and capital. Mobility of these three factors and multiplicity of demand tends to eliminate abnormal intensive margins and absolute intensive marginal rents. World-wide mobility of the three factors would cause the intensive margins in all enterprises to be coincident. In case of an abnormal intensive margin the marginal units and all more desirably situated units in the particular business receive a greater return than would accrue to them if additional increments were utilized until the intensive margin for the business became normal. This additional return is an expense from the consumer's point of view, which enters price in the same manner as wages and interest.

What, then, are the final conclusions?

A. Where monopoly power of any kind exists, absolute intensive marginal rents will appear. These rents will enter price as do wages and interest, and will accrue to the factor possessing the monopoly power, whether that be land, labor, or capital. On the frontier, for example, where land was cheap, labor and capital were ordinarily

¹ Patten, *Dynamic Economics*, p. 82.

scarce, and, therefore, received larger rewards than in more populous districts. Scarcity or monopoly gain here accrued to labor and capital instead of land. On the contrary, where land of a given grade is not abundant, an absolute intensive marginal rent may accrue to it. Differential rents cannot be considered to be monopoly gains. In a theory of price a sharp distinction ought to be drawn between differential rents and absolute intensive marginal rents.

B. Relative marginal rents and absolute extensive marginal rents have no direct significance in a theory of price.

C. In actual, every-day life in a modern, complex industrial society absolute intensive marginal rents may arise in regard to any one or all factors of production and in any one or in all enterprises. These abnormal margins interact upon each other. "Thus monopoly will struggle with monopoly."¹

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¹ Patten, *Theory of Prosperity*, p. 93.

NOTES AND MEMORANDA.

ON THE BEGINNING OF THE COTTON INDUSTRY IN ENGLAND.

Baines,¹ after a careful review of all the sources of information available to him, showed that nearly every allusion to English "cotton" weaving before 1600 bore indication of processes applicable only to woollens,² and cited as the earliest unequivocal testimony a passage of the date of 1641 which refers to the linen warp and cotton weft characteristic of the first period of cotton manufacturing:—

The town of Manchester, in Lancashire, must also be herein remembered, and worthily for their encouragement commended, who buy the yarn of the Irish in great quantity, and, weaving it, return the same into Ireland to sell. Neither doth their industry rest here, for they buy cotton wool in London that comes first from Cyprus and Smyrna, and at home work the same, and perfect it into fustians, vermilions, dimities, and other such stuffs, and then return it to London, where the same is vented and sold, and not seldom sent into foreign parts, who have means, at far easier terms, to provide themselves of the said first materials.³

¹ Baines, *Cotton Manufacture*, 1835, pp. 91-96.

² "Bolton-upon-moor-market standeth most by cottons and coarse yarn. Divers villages in the moor about Bolton do make cottons." Leland, *Itinerary*, 1538, vol. vii. fol. 57. "Many poor people have been well set a-work as well with dressing and frising of the said cottons, as with putting to sale the same." Statute 33 Henry VIII., chap. xv., 1542. "All cottons called Manchester, Lancashire, and Cheshire cottons, full wrought to the sale, shall be in length twenty-two yards, and shall contain in breadth three-quarters of a yard in water, and shall weigh thirty pounds in the piece at least." Statute 5 and 6 Edward VI., 1552. "Every of the said cottons, being sufficiently milled or thicked, clean scoured, well wrought, and fully dried, shall weigh twenty-one pounds at the least." Statute 8 Elizabeth, chap. xi., 1566. "Lancorum pannorum honore (Manchester Cottons vocant)." Camden, *Britannia*, 1590, p. 612.

³ Roberts, *Treasure of Traffic*, 1641, pp. 32, 33.

Upon this passage he commented as follows:—

No mention has yet been found of the cotton manufacture earlier than the year 1641, and there are good reasons for concluding that it could not have existed very long before that period.¹

From the above evidence it is manifest that the cotton manufacture had, in 1641, become well established at Manchester. . . . Of course fustians must have been made at Manchester and Bolton for a considerable time before the publication of Lewes Roberts's book.²

Writers on the cotton industry continue to cite the passage from Roberts as the earliest trace of this manufacture in England.³ Cunningham, however, notes "an isolated proposal in 1626 to employ the poor in the spinning and weaving of cotton wool."⁴

I have two bits of evidence earlier in date than the indications already mentioned. The first consists merely of a line or two in a petition of the presumed date of 1610. The petitioner asks the Earl of Salisbury for confirmation of a grant made to him for reformation of frauds daily committed in the manufacture of "bombazine cotton

¹ Baines, p. 97. His reason for this statement is that the poor law of 1601 omits cotton from the list of raw materials which the overseers were authorised to provide "to set the poor on work," and also that Camden and other authors of the last decade of the sixteenth century "are silent as to any manufacture of cotton."

² *Ibid.*, pp. 101, 102.

Baines adds another, but ambiguous, allusion, which may be taken for what it is worth:—

"George, Humphrey, and Ralph [Chetham] embarked in the trade for which Manchester had for some time been distinguished, the chief branch of which was the manufacture of cottons. Bolton at that period was no less the market for fustians, which were brought thither from all parts of the surrounding country. Of these last especially the Chethams were the principal buyers, and the London market was chiefly supplied by them with those materials of apparel, then in almost general use throughout the nation. . . . Humphrey Chetham, when high sheriff of this county, 1635, discharged the place with great honor, inasmuch that very good gentlemen, of birth and estate, did wear his cloth at the assize to testify their unfeigned affection to him." Fuller, *Worthies of England*, 1663, vol. i. p. 554.

³ See, for example, Chapman, *Lancashire Cotton Industry*, 1904, p. 2.

⁴ Cunningham, *Growth of English Industry and Commerce*, 1903, vol. ii. p. 623, quoting J. Stoit, British Museum Additional MSS. 12,496, fol. 236.

A plausible theory, adopted by Baines (p. 99) and subsequent writers (*e.g.*, Cunningham, *op. cit.*, and Chapman, p. 1), connects the rise of the Lancashire cotton industry with the immigration of Flemish artisans after the fall of Antwerp. But positive proof of the theory is still lacking.

such as growth in the land of Persia being no kind of wool."¹

More significant is a printed petition to Parliament,² undated, but bound up with other documents of 1620-21. I have elsewhere³ alluded to the circumstances which inspired this petition. A patent for searching and sealing new draperies was granted in 1594, and this was transferred to the Duke of Lennox after the accession of James I. The implication of the petition is that the manufacture of cotton goods was introduced after the patent of 1594, and that the Duke of Lennox attempted to bring them with other new cloths under his search and supervision. It is probable that, had these goods attracted attention in 1594, they would have been included in the alnagership, and apparently the petitioners did not know of any English cottons before that date. The petition claims to have been written twenty years after the introduction of the cotton manufacture, and therefore must have been presented to some Parliament sitting more than a score of years after 1594. It could not, therefore have been presented to the Parliament of 1610, and hardly as early as that of 1614. It is evidently not of the time of Charles, else King James would have been referred to as "his late Majesty" rather than as "his Majesty," and the Duke of Lennox, who died in 1624, would have been spoken of as "the late duke." It would seem, therefore, that the petition must have been offered in 1621 or 1624, and thus the internal evidence accords with the external indication of the date, and 1621 may be accepted as approximately correct.

If the petitioners were well informed when they wrote that the manufacture was planted in England "about

¹Maurice Peeters to the Earl of Salisbury, State Papers, Domestic, lix. 5. (The calendar assigns the date 1610. The letter could not have been written later than 1612, when Salisbury died.)

²London Guildhall Library, vol. Beta, *Petitions and Parliamentary Matters*, 1620-21, no. 16 (old no. 25). The text of this petition is appended. (I have modernized the spelling.)

³*English Patents of Monopoly*, in press. Harvard Economics Series, vol. I. p. 27 and note, pp. 27, 28.

twenty years past," we should conclude that the cotton industry began there about the opening year of the seventeenth century. Now, obviously, the cotton manufacturers and merchants of 1621 would not have to depend upon tradition for their information. The facts were still in lively recollection, and, so far as we can see, they had no particular object in deliberately giving a wrong date. Their argument rested on the easily verifiable fact that cotton goods had not been included in the patent of 1594, and that they were included in that of 1613.

This does not fix with absolute certainty the date of the making of the first piece of English cotton cloth, but that cottons became a regular article of trade soon after 1600 may be accepted with reasonable confidence.

I give the full text of the petition, not merely because it is the earliest authentic document which I have found relating to English cottons,¹ nor merely because it assists in fixing the date of their introduction, but for the reason that it affords some insight into the early conditions of the industry. From it, for instance, we learn that the workers and dealers in this trade were not allowed to pursue their business free from public restraints. It may be true, as has been suggested, that the fact that Manchester was an unincorporated town helped the new cotton manufacture by removing it from repressive gild regulations, but the petition shows that cotton goods shared with other new draperies the hardships involved in the attempt to establish a national supervision over the domestic system.

**TO THE HONORABLE KNIGHTS, CITIZENS, AND BURGESSES
OF THE COMMONS HOUSE OF PARLIAMENT:**

**THE HUMBLE PETITION, AS WELL OF DIVERS MERCHANTS AND CITIZENS
OF LONDON THAT USE BUYING AND SELLING OF FUSTIANS MADE
IN ENGLAND, AS OF THE MAKERS OF THE SAME FUSTIANS.**

Whereas, by the statutes of this realm, broadcloths and other cloths made of wool, and other kinds of cottons, frizes, and rugs are to be searched and sealed by his Majesty's alnager, yet in the 36th year of

¹ Excepting the brief notice in the petition of 1610 which I have already cited.

the reign of Queen Elizabeth a patent was granted to Sir George Delves and William Fitzwilliams as shepherds for the sealing of divers commodities, as bays, rash, stamell, says, worsteds, grogramms, mockdoes, frimadoes, fustians of Naples, blankets, and all sorts of new draperies and new stuffs made of wool only, or most part of wool; and a subsidy and fee for the same for twenty-one years, upon pretence, being made of wool, they were within the equity of the former statutes. And whereas about twenty years past divers people in this kingdom, but chiefly in the county of Lancaster, have found out the trade of making of other fustians, made of a kind of bombast or down, being a fruit of the earth growing upon little shrubs or bushes, brought into this kingdom by the Turkey merchants, from Smyrna, Cyprus, Acra, and Sydon, but commonly called cotton wool; and also of linen yarn most part brought out of Scotland, and othersome made in England, and no part of the same fustians of any wool at all, for which said bombast and yarn imported, his Majesty hath a great yearly sum of money for the custom and subsidy thereof.

There is at the least 40 thousand pieces of fustian of this kind yearly made in England, the subsidy to his Majesty of the materials for making of every piece coming to between 8d. and 10d. the piece; and thousands of poor people set on working of these fustians.

The right honorable Duke of Lennox in 11 of Jacobus, 1613, procured a patent from his Majesty, of shearer of new draperies for 60 years, upon pretence that wool was converted into other sorts of commodities to the loss of customs and subsidies for wool transported beyond seas; and therein is inserted into his patent, searching and sealing; and subsidy for 80 several stuffs; and amongst the rest these fustians or other stuffs of this kind of cotton wool, and subsidy and a fee for the same, and forfeiture of 20s. for putting any to sale unsealed, the moiety of the same forfeiture to the said duke, and power thereby given to the duke or his deputies, to enter any man's house to search for any such stuffs, and seize them till the forfeiture be paid; and if any resist such search, to forfeit 10l. and power thereby given to the lord treasurer or chancellor of the Exchequer, to make new ordinances or grant commissions for the aid of the duke and his officers in execution of their office.

The petitioners do conceive (which they nevertheless leave to the consideration of this honorable House), that the said patent concerning fustians made of such bombast or cotton wool, and linen yarn, to be void in law, there being no wool used therein, and the king having subsidy and custom for the stuff whereof these fustians are made, and the patent a grievance and loss to them in their trades, and by seizing their goods, and exactions of such as pretend to be the duke's deputies, of great sums of money for sealing the fustians; or putting the petitioners to annual rents to be at peace, and where they exact money they force the parties to give them a general release; and others troubled by warrants from justices of peace; and namely in London,

the deputy alnager seized a pack of fustians of one George Cornish, worth 50*l.*, and forced him to pay 40*s.* to the said deputy before he could have again his goods, and give the deputy a general release.

A pack of fustians of Lawrence Brinsley seized as aforesaid, and he forced to pay 20*s.* 6*d.* and give a release.

Robert Stevens, a pack taken from him, and he forced to pay for the same 15*s.* 6*d.* and give a release.

John Crow had 7 pieces seized, which cost him 22*s.* to get again.

Robert Graye had a pack taken from him, and redeemed by replevin.

John Goffe had a pack taken from him, for which he arrested the alnager, and spent 10*l.* and thereby got his goods again after 6 months kept from him, but could not bring him to trial.

John Brand of Buntingford being by the duke's deputies many times called before justices of peace for refusing to give them their demands, was by them brought into the Exchequer, and being a poor man and unable to stand in the law, was forced to agree with them, and give a fine and 4*s.* yearly as a rent, and now called the duke's tenant.

Many others are compelled, some to take from them a stamp to seal their own fustians withal, and become their tenants at a yearly rent, for they never care for the sealing of the fustians so they may get money.

For all which causes the petitioners humbly pray, the patent may be brought and seen in this honorable House, and the petitioners relieved, as to this honorable House shall seem good.

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CHANGE IN MORTGAGE TAXATION IN NEW YORK IN 1906.

This year is notable in the tax history of the State for the disappearance, at least for the present, of the tax on general property for State purposes. A constitutional amendment adopted last fall removes the necessity of imposing this tax for meeting payments on the State canal debt in those years when the receipts from other sources are adequate.

The recent session of the legislature gave a large share of attention to the subject of taxation. A tax commission of fifteen members was authorized¹ to investigate the subject and to report to the next legislature in January, 1907. Minor changes were made in the taxation of miscellaneous corporations, reducing, in certain cases, the tax on capital

¹ Laws of 1906, chap. 346.

stock when the dividends were below 6 per cent., and making still more complicated the already absurdly complex system of corporation taxes in the State. A minor change was made in the incorporation tax in cases where the amount of capital stock has been decreased and is again increased. There has been a demand from New York City for some legislation that will reach more of the personal property of wealthy men doing business in New York City and nominally residing outside of the State. A law was passed¹ looking to this end, taxing personal property of non-residents, in some cases, when it has an actual situs in the State. It is not clear just how this changes the law or what effect practically it will have. Finally, among the minor events, the governor vetoed a bill to increase the tax on the gross receipts of racing associations.

By far the most important measure of taxation of the session was the repeal of the annual mortgage tax imposed last year, and the substitution for it of a recording tax of the same amount ($\frac{1}{2}$ per cent.), but payable once only at the time of record. Most strenuous efforts were made by parties in interest to repeal the annual tax before it became a large source of income, as it was recognized that later repeal would be impossible. The advocates of repeal argued strongly that the measure had been a failure as a source of revenue. At the same time they frankly confessed that thus far the law had been evaded and payment had been delayed by temporary means, and that the annual tax, if continued, would doubtless be enforced after July 1, 1906. In the first year of enforcement the yield would be about \$3,000,000, and would increase to at least \$10,000,000, and would continue at that sum or more annually. The measure thus far had been a failure as a revenue producer because of the postponement of the payment of the tax in the hope that it could be repealed. This was done (as was explained by J. J. Ronner, register of New York County, in the *Record and Guide*, November 25, 1905) by various legal devices, as by making the mortgages payable on demand, which deferred

¹ Laws of 1906, chap. 248.

the payment of the tax until July 1, 1906, and by making mortgages payable in some brief time, as ten days, so that only an amount proportional for ten days was actually paid, and the remainder was postponed until July 1. Other modes doubtless were adopted. For example, it was reported by opponents of repeal of the annual tax that hundreds of millions of dollars of corporation mortgages issued for electric railways and the like were being withheld from record, awaiting the repeal of the tax.

The repeal of the tax certainly was favored by real estate interests, and probably by a number of large corporation interests, who as the best practicable compromise favored a recording tax, while preferring the entire abolition of mortgage taxation. The continuance of the annual tax was favored by the rural counties and by several classes of persons: by citizens with no financial interests who approved any measure aiming to reach "capital"; by some trustees of estates who, under the old general property tax, had paid 25 to 50 per cent. of the total income of the estate; by certain corporate holders of mortgages exempt from local taxation who get a higher rate of interest under the new law through the increase of the rate, as explained below; and by lenders in rural counties who had been taxed much more heavily under the old general property tax.¹

Especially interesting to students of shifting and incidence has been the effect of the annual tax on the rate of interest, as it was shown by the New York Tax Reform Association and by the Allied Real Estate Interests. A comparison of the rate of interest in neighboring counties of Massachusetts and New York and of Pennsylvania and New York was made in an argument submitted by Lawson Purdy, secretary of the New York Tax Reform Association.² The fact that in Massachusetts mortgages are exempt, that in Pennsylvania

¹ See article by B. Aymar Sands, president of the Allied Real Estate Interests, in the *Record and Guide*, January 27, 1906, where it is frankly assumed that nobody but trustees paid taxes on mortgages in New York under the old general property tax law.

² See pamphlet, *Mortgage Taxation and Interest Rates*, published by the New York Tax Reform Association, 52 William Street, New York.

they are subject to taxation at the rate of four mills per annum, and that in New York there has been successively a general property tax ranging from 1 to 3 per cent. according to locality, an annual tax of $\frac{1}{2}$ per cent., and now a recording tax of $\frac{1}{2}$ per cent., makes the comparison a very instructive one. The conclusion of the study was that while under the old general property law the tax was nearly always evaded, the liability to taxation increased the rate of interest by a mill and a half in some counties and as much as three to four mills in other counties. The annual mortgage tax law increased the rate of interest several mills more, and, it was claimed, the total increase over what the rate would be for mortgages exempt from taxation is slightly more than the amount of the tax.

The first bill passed by the legislature was vetoed by the governor, who in his message pointed out a number of defects in details, and left the impression that he would sign the bill when it was properly amended. An amended bill meeting his objections became a law,¹ and goes into effect July 1 of this year. It is expected to yield about \$3,000,000 annually, which, as under the law just repealed, is divided equally between the State and the minor local divisions. The recording tax will apply only to new mortgages recorded after July 1, 1906, and all mortgages recorded before that time will be liable to taxation under the old general property tax. But no considerable attempt thus to enforce it against old mortgages may be expected.

The legislation of the past two years takes two important steps towards the legal exemption of mortgages from taxation. The annual tax was one step, which, however, practically resulted in heavier taxation in the case of most mortgages. The recording tax is qualitatively as bad as the annual tax, but imposes a very much lighter burden. The logical outcome of complete exemption of the mere paper evidences of a claim on income may be expected, but not until public opinion has progressed very much further in the direction in which it has been moving of recent years.

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¹ Laws of 1906, chap. 532.

TAXATION OF RAILROAD AND CANAL PROPERTY
IN NEW JERSEY.¹

Chapter 82 of the Session Laws of 1906, passed by the legislature of New Jersey, is intended to alter radically the rate of taxation of railroads and canals in that State. Prior to the enactment of this act the tax rate upon the greater part of such property was by law limited to one-half of 1 per cent. upon the dollar of valuation. Hereafter the greater part of all railroad and canal property is to be taxed at the "average rate of taxation" imposed upon general property. In order to understand the change contemplated by the act in question, several other matters require preliminary explanation. These are, in order, the historical reason for the previous limitation of the rate of railroad taxation, the system of railroad and general taxation in the State, and the reasons for the changes sought by the act under review.

The previous limitation of the tax rate upon the greater part of railroad and canal property to one-half of 1 per cent. of their "true value" dates from the act of April 10, 1884. The explanation of this limitation in the rate is that New Jersey, in common with other commonwealths, encouraged the formation of transportation corporations at their inception by exempting them from taxation or by mitigating the tax burden² which would have fallen upon them under the general tax laws. This policy in New Jersey goes back as far as 1830. In some cases special charters were granted, containing such abatements or exemptions. Some corporations declare that these charters are perpetual and ir-repealable, doubtless basing their contention in part upon the Dartmouth College decision. The act of April 10, 1884, was framed somewhat after the model of the act of April 2, 1873, and continued the limitation in the rate of taxation

¹ In the preparation of this note I have been aided by Hon. H. D. Thompson, member of the General Assembly from Mercer County, to whom I wish to acknowledge my obligation.

² Black, *New Jersey Law of Taxation*, 2d ed., pp. 79, 80.

upon railroad and canal property avowedly as a compromise, designed to mediate between the previous anomaly of railroad taxation and other taxation. The constitutionality of the act of 1884 was contested by certain transportation interests, but it was upheld by the Court of Errors and Appeals, the court of last resort in the State.¹

The act of 1884 created a State Board of Assessors. This board was required to assess the property of railroads and canals. For purposes of assessment the property of such companies was, and continues to be, divided into four classes: (1) main stem or water-way; (2) other real estate; (3) tangible personal property; (4) franchises. The "main stem" of a railroad is defined as covering the road-bed not exceeding one hundred feet in width, including rails, sleepers, and passenger stations.² In the case of canals the "water-way" includes the towing-path and bermebank. "Other real estate" includes road-bed (namely, road-bed other than main stem), water-ways, reservoirs, tracks (sidings), buildings, water-tanks, water-works, riparian rights, docks, wharves, and piers. Tangible personal property includes rolling stock, canal and ferry boats, tools and machinery necessary for and used in State commerce. Franchises include intangible values, and are estimated by the State Board of Assessors presumably at 60 per cent. of the excess, if any, of the value of the securities (bonds and stocks) over the assessed value of main stem, other real estate, and tangible personalty.³ Stocks and bonds are, by law, practically exempt. With the exception of "other real estate" commonly spoken of as "property of the second class," the tax rate on the dollar of assessed value as determined by the State Board of Assessors was by the act of 1884 fixed and limited at one-half of 1 per cent. The revenue so raised

¹ *Central Railroad Co. v. State Board of Assessors*, 19 Vroom, p. 146.

² The Act of February 26, 1906, changes the definition of "main stem" so as to exclude passenger stations and freight buildings.

³ Since 1884 the State Board of Assessors have not published separately the valuation of franchises. In that year they followed the method above indicated. *New Jersey Tax Commission, 1904-05, Report and Briefs*, p. 162.

went into the State treasury for State expenses. On property of the second class—namely, “other real estate”—there was also levied a State tax of one-half of 1 per cent. But in addition this property of the second class was liable to a tax for local purposes not to exceed 1 per cent. upon the dollar of valuation as determined by the State Board of Assessors. Beginning in 1897, the entire tax derived from property of the second class was paid over to the various taxing districts traversed by a railroad or canal, each district receiving the tax raised on the State Board of Assessors’ valuation of that segment of railroad or canal located within the local taxing district concerned. In 1905 property of the second class was subjected to taxation *at the prevailing tax rate in the local taxing district*. The assessment of this class of property (real estate other than main stem) continued to be made by the State Board; but the previous maximum limit on the local tax rate (1 per cent.) was done away with. The Maximum Tax Rate Act of 1905 provides, however, that the local rates shall not exceed 1.7 per cent. plus the school tax rate in cities over 50,000 inhabitants, and shall not exceed 1.5 per cent. plus the school tax rate in the other taxing districts.¹ No other tax on said second-class property is levied.

Since 1884 there has been practically no direct State tax in New Jersey. It is true that there is levied a so-called State school tax upon general property as assessed by local assessors. But nine-tenths of the amount collected under this tax in each county is returned to the county, the remainder being distributed by the State, with some discretionary power, to those sections requiring additional funds for schools. This slight exception does not invalidate the general proposition that there has been no direct tax for general State purposes for over twenty years. The revenues from corporations, including the annual tax and charter

¹ By an act passed at the recent session (1906) these maximum rates are repealed and other maxima are prescribed on a sliding scale, the aim being to establish eventually a low tax rate, in the hope that the need of revenue may compel assessors to undertake the listing and taxing of personality that now escapes.

fees, together with the collateral inheritance tax, provide for the greater part of State expenses. The idiosyncrasies of assessment in the different counties do not, therefore, occasion any great unfairness so far as the taxation of general property is concerned. If Hunterdon County assesses property at 80 per cent. of its true value, and Cape May County at 48 per cent., no great injustice is done as long as both counties raise only the revenue required for local needs.

In 1904, however, complaint had grown acute with respect to what was claimed to be the unfair privilege enjoyed by railroads in the matter of taxation. It was argued that the average rate of taxation on general property in the State was about \$22 per \$1,000 of valuation, while railroads and canals paid at the rate of \$6.80 per \$1,000 of valuation.¹ Certain localities, like Jersey City, were especially aggrieved, alleging that extensive terminals within their limits were taxed at a much lower rate than surrounding real estate. The transportation interests replied that the disparity in tax rates was more apparent than real, owing to the more complete disclosure of their property and its more rigorous assessment by the State Board than was customary in the case of local assessors. It was the old case of *Pot versus Kettle*. Each was able to show the undoubted delinquencies of the other. The issue of "equal taxation" was shown, however, to have great popular strength behind it, and the present law aims at the assimilation of railroad property to other property, so far as the rate of taxation is concerned.

The act of April 5, 1906, is a supplement to the act of March 27, 1888, which, in turn, was a revision of the original act of April 10, 1884, for the taxation of railroad and canal property. The act of this year continues the assessment of the main stem, tangible personalty, and franchise by the State Board of Assessors. The assessment of railroad property of the second class (real estate other than main stem) is hereafter to be made by local assessors. The local assessors in every taxing district of the State are now required on or before October 1 of each year to forward to

¹ *New Jersey Tax Commission of 1904-05, Reports and Briefs*, pp. 106, 108.

the State Board of Assessors a certified statement of the total valuation of property assessed by them, each in his own taxing district, and also the rate of taxation in said district. The aggregate value of all property thus returned shall be deemed "the aggregate value of the general property in the State." The law also requires that the tax rate in each district shall be multiplied into the total property assessed therein, and the several products thus obtained shall be added, and the aggregate so ascertained shall be deemed "the aggregate taxes of the State." The "aggregate taxes of the State" thus defined shall be divided by "the aggregate value of the general property in the State," and the quotient is to constitute the "average rate of taxation" for the year. At this rate the State Board of Assessors are required to compute the tax on main stem, tangible personalty, and franchise. The tax on these elements of railroad and canal property continues to go in the first instance into the State treasury, while the entire taxes raised on railroad property of the second class (real estate other than main stem) continue to go to defray local expenditure. By a separate act, approved April 20, 1906, taxes on classes I., III., and IV. of railroad and canal property in excess of one-half of 1 per cent. on the valuation thereof are "devoted to the maintenance and support of an efficient system of free public schools, and shall be apportioned annually . . . among the several counties of the State . . . in proportion to the amount of taxable real and personal estate of said counties. . ."

The probable results of the act cannot be very accurately forecast. The transportation interests will probably assail its constitutionality, although the decision in the case of *Central Railroad Co. v. State Board of Assessors*, 19 Vroom, p. 146, would seem to indicate that it will stand the judicial test. The railroads are said to be urging local assessors to make a higher valuation of general property to local tax districts, inasmuch as this will reduce "the average rate of taxation," and the railroad taxes in consequence. In case the law stands, it ought largely to augment the receipts of

the State treasury, but just to what degree experiment alone can determine.

Appended is a summarized table taken from page 746 of Part I. of the Annual Report of the State Board of Assessors for 1905:—

Assessed valuation of railroads and canals, excepting property of the second class and tangible personalty, but including valuation of franchises not separately given	\$162,719,300.00
Assessed valuation of tangible personalty necessary for and used in State (not interstate) commerce	27,478,943.00
Total assessable for State uses	190,198,243.00
Assessed valuation of "second-class" property (hereafter to be assessed by local officials and not by State Board of Assessors)	46,522,328.00
Aggregate assessed valuation	236,720,571.00
Tax for State uses	950,991.21
Tax for uses of taxing districts	1,136,261.29
Total taxes assessed (for 1905)	2,087,252.50

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SELIGMAN'S PRINCIPLES OF ECONOMICS.¹

Professor Seligman's volume is designed to be a text-book, and is to be judged mainly as such. No doubt the preparation even of the shortest text-book gives abundant room for the exercise of the critical and constructive faculty. In the present confused state of economic theory there is no possibility of confining one's self to the mere exposition of accepted principles. None the less the main thing is to state clearly and simply those principles—after all, not a few—on which economists are agreed, and to point the way to further study for those who are so minded.

From this point of view the question that presents itself at the outset in considering Professor Seligman's book is the order in which the topics are presented. There is a first

¹ *Principles of Economics, with Special Reference to American Conditions.* By Edwin R. A. Seligman, McVickar Professor of Political Economy, Columbia University. New York: Longmans, Green & Co. 1905.

part, on fundamental concepts and questions of law and method; then a second part, on the foundations of economic life (natural environment, population), the development of economic life and thought, and the conditions of economic life (property, competition, slavery); and, finally, a third part, treating value, production, exchange, distribution, money, international trade, and the other subjects that make up the kernel of economics. I speak of this third part as final, for a fourth part, headed "Conclusion," is brief, containing but two chapters, on government and business (socialism, public ownership, and the like) and on riches and poverty. Finance and taxation are not treated at all,—a limitation in scope which, in view of the apportionment of space to the other subjects, must be held wise.

This is the order commonly found in recent text-books, which therein follow the German model. My own judgment has long been that it is a bad order,—at least, in a book designed for beginners. When an author addresses those already conversant with the subject, it does not greatly matter at what place he delivers himself on questions of law and method, of private property and competition. The trained student will see the bearing of it all. I am inclined to believe, indeed, that even in a book for such readers opinions on scope and method are better understood after, not before, the writer has set forth the specific economic laws in which he has faith. But in a text-book all this preliminary fencing can signify nothing to the persons for whom it is intended. Your beginning student has not the remotest idea what an economic law is; and the only way to teach it to him is by concrete example,—by getting into his head the principles of value, price, rent, interest, wages, and what not. When once he has grasped these, it will be worth while to generalize, to point out what is the nature of the conclusions reached, and in what sense they are "laws." Until he has grasped them, all discussion about economic law is meaningless. The same holds good of economic method. What can the beginner conceive as to inductive and deductive methods, or why "each method, when pushed to an extreme, is either

dangerous or barren"? (p. 28). Here, again, it may be worth while, *after* the student has worked his way to some conclusions, to point out how they have been reached, and what sort of evidence exists for substantiating them. But to consider economic method in advance is futile. So it is as to the relation of economics to other sciences: until one knows something of the subject-matter of economics itself, how is it possible to form a notion of its relation to other sciences? In the section on this last topic Professor Seligman remarks, for example, that "value can have no existence apart from the mental conditions of man. The whole conception of demand is essentially psychological" (p. 29). What can this signify to the youth or maiden who has yet to learn the first elements of the meaning of value and demand in economics? I suspect that most teachers of economics have found it best to skip the whole or nearly the whole of such introductory matter as is contained in Professor Seligman's first part, and to proceed at once to something more readily grasped by their pupils.

Something of the same sort is to be said of the second part, in which are treated such subjects as population, economic history, the growth of economic thought, private property. Opinions doubtless would differ here, yet my judgment is that most can be postponed with profit. Consider such a subject as the history of economic thought,—classical antiquity, the mercantilists, the British school, modern economics. I doubt whether the elementary student can get, under any circumstances, much notion of what all this means,—hardly more than a string of names and a date or two. The situation is substantially the same as to private property and the theories thereon. Here we find Professor Seligman, for example, arguing as to the labor theory of property, the influence of labor and of demand, the relation of great fortunes and inheritance taxes to enterprise and accumulation (pp. 133, 138),—reasoning which can be intelligible only to one who has already been taught something of the relation of labor and utility to value, and of private accumulation to social capital.

The case is more doubtful as to other topics taken up in the second part, especially population and economic history. Following the example of Professor Adolf Wagner, Professor Seligman discusses the theory of population in his early foundation-laying chapters. No doubt this subject can be made interesting and in some respects comprehensible to the beginner; but can its significance be made clear? Professor Seligman discusses three conclusions that might be drawn from the Malthusian doctrine, as to socialism, wages, and economic progress (p. 61). Once again the question arises whether the student at this early stage, before a word has been said as to production, distribution, the causes of progress, and the obstacles to it, can follow the reasoning. I speak not now of the discussion itself, which seems to me open to some criticism, but only of the place which is given it in the unfolding of the subject.

As to economic history, probably there would be many to approve its presentation in the earlier chapters, like those on the economic stages, the historical forms of enterprise, the economic development of the United States. The interest and importance of these topics are not to be denied; yet to what extent can they find a place in a text-book, and what place? Take the economic stages. Is it worth while to enumerate the stages of primitive technique, and to inform the student that the archæologists are now doubtful whether the bronze age preceded the iron age, or succeeded, or was contemporaneous with it (p. 70)? In connection with the analysis of capital, historic illustration of the growth of tool-using might be helpful. But is it worth while to tell the beginner that "it is erroneous to assume that the hunter was necessarily succeeded by the herdsman," and "in the same way it is erroneous to think that the herdsman was everywhere succeeded by the farmer" (p. 72)? Or shall we bring to his attention "the original monopoly of sexual relations," "the ensuing promiscuous methods," "the uterine clan," "the origin of totem worship, still shrouded in mystery" (pp. 85, 86)?

No one doubts the interest and significance of economic

history. Yet any adequate treatment of economic history is extremely difficult to fit into the analysis of the industrial society in which we live and which chiefly interests our students. For this reason it is better, in my own judgment, to take it up as a separate study and with a separate book or set of books, either *pari passu* with the study of those doctrines which we try to develop as to contemporary society, or after such study, but hardly before it. This is not inconsistent with the use, in a text-book like this, in direct connection with the statement of principles, of specific illustrations from economic experience; tho the difficulty of finding apt illustrations and the almost inevitable resort to hypothetical cases are familiar to every teacher. Even the economic history of the United States, the most recent and the most modern body of economic experience, is not easily brought into close logical connection with our economic theory. The chapters on it in our text-books hang in the air, quite apart from the rest of the matter; and this is equally true of Professor Seligman's chapter. He tries, indeed, to connect the economic development of this country, if not with general principles, at least with his theories of the general evolution of society. "The [American] communities which had left the frontier stage behind them developed from the family system of industry, through the help, into the handicraft and domestic system" (p. 100). But this application of a doubtful generalization in economic history to the interpretation of our country's development seems to me purely fanciful: the economic history of the United States is distorted when it is forced into such a formula. So the South is said to have "heaped up its wealth in the transition forms from an isolated to a trade economy resting on slavery" p. 102. again suggesting analogies of very doubtful accuracy. On the other hand, the charts on the production of corn, wheat, and oats, on capital invested in manufactures, average earnings of workmen, and the like, which are appended to this chapter on the economic history of the United States, seem to me to have the effect of mere pictures: they stand in no clear relation to anything said in

the text about economic development, still less in any relation to the general body of economic principles.

We come now to the third part in Professor Seligman's book,—the exposition of value, exchange, distribution, money, and the like. The chapters on these subjects contain, after all, the gist of what the economist has to say in a book like this. Here the interest is not so much in arrangement or selection as in the substantive conclusions. Unfortunately, we differ very much on some of the most important of these conclusions. I say unfortunately, for the differences are highly inconvenient to those of us who have to teach; tho doubtless they are in reality healthful, and will lead in the end to a better adjustment of our foundations. Professor Seligman is, in general, eclectic. He shows the results of omnivorous reading, and tries to give due weight to the reasoning of all sorts of diverging thinkers. On the crucial questions of distribution, however, he follows the lead of his colleague, Professor J. B. Clark. To express an opinion on this part of his book is, therefore, to express it on that scholar's contributions to economic theory.

Professor Seligman is more than appreciative of the debt he owes to his colleague, to whom he gives praise such as it is hazardous to accord to one still among us. In the introductory list of treatises Professor Clark's *Distribution of Wealth* is described as "of fundamental and epoch-making importance" (p. 19),—a note of praise not sounded for any other living economist. I can only record regretfully my dissent from such unique praise, and my dissent from an exposition of economic principles which follows so largely Professor Clark's lead. Those who accede to the Clarkian reasoning and conclusions will, of course, welcome their incorporation into a volume for students. Those who, like myself, think much of that reasoning inconclusive and many of the theorems untenable, will be loth to teach them. I cannot, for example, find it a helpful way of explaining distribution to describe all incomes as surplus. As Professor Seligman puts the doctrine (p. 374), "The rent of a boat is a

surplus over that of a no-rent boat; the wages of a laborer is [sic] a surplus over that of the convict or no-wage laborer; the interest of capital is a surplus over the capital so invested as to earn no interest." No doubt there always is some fraction of capital which is nearly worn out, and which continues to be used, through lack of intelligence or enterprise, even tho it no longer yields a return. But I have never been able to see that it sets the pace, so to speak,—that it settles the remuneration for all capital. And it has always seemed to me even less in accord with the facts to speak of "the convict or no-wage laborer" (Professor Clark mentioned lunatics: his colleague does not go so far) as setting a standard by which all other wages are measured and determined. Again, in this volume, as in Professor Clark's writings, rent and interest are treated as two phases of the same phenomenon: "interest is commuted rent" (p. 392). There are, however, remarks which indicate that Professor Seligman is not willing to go the full length on this last topic, and would admit that there is some difference of moment between rent and interest. Speaking of the single tax, he maintains that there is unearned increment not only from land, but elsewhere as well, mentioning investments "in the shares of a street railway, a newspaper, or a bank" (p. 390), whose value may be enhanced by the growth of population. (Observe, by the way, that one of these cases—the street railway—is precisely such as the consistent single-taxer would select for applying his principle; while the other two—newspapers and banks—happen to illustrate conspicuously the importance of good will.) He adds: "It may, nevertheless, be conceded that there is a difference to this extent, that ultimately the ownership of the capital controls its management and conditions its most effective utilization,"—a difference which justifies "a somewhat higher rate of taxation on land." This implies that, after all, rent and interest do not represent merely two ways of looking at the same thing, but are phenomena between which there are fundamental differences.

Whatever be one's opinions on these crucial questions,

the beginner in economics will find great difficulty in following this exposition of the Clarkian doctrines. I find great difficulty in following these doctrines myself, and suspect that many brother economists are in the same case. The explanation is that, whether at bottom sound or not, they have not been sufficiently sifted and worked out. Professor Seligman's style in general is direct and positive: it has the great merit of absolute lack of affectation. But even the student who is well trained and diligent must have great difficulty in following his discussion of distribution and value. Sometimes this is due, I cannot but believe, to the fact that the thought itself is not clear and consistent. Take, for example, the passages on "individual and social cost" and "marginal social cost" (pp. 192, 198). "Although the street sweeper may work the harder, the sacrifice or cost to society is less than in the case of a factory hand. The latter saves society more effort" (p. 193). Now this is a conception of cost and sacrifice entirely different from the usual one, and it has nothing to do with the familiar and important problem whether reward is in proportion to sacrifice. Its only bearing is on the utility of a given sort of work, which might possibly be measured in some such way; tho even from this point of view I see no conclusion to be drawn from the notion, and no application to the explanation of exchange and value. Much is said also as to the distinction between individual and social utility. The gist of this matter is very simple. In a large and complicated society the demands of a great many persons of different tastes and different purchasing power affect the price at which an article will be disposed of. This, and nothing more, is meant when it is said that "society" demands a thing, or "society" sets the price at which a thing will be sold. I have never been able to see that Professor Clark's elaborated theories do more than set forth this familiar fact. I have the same feeling—it may be due to dulness on my part—in regard to Professor Clark's distinction between the utility of a commodity as a whole and the different constituent utilities of the commodity. All readers of Professor Clark will recall the

chapter in which the highly ornamented canoe is so elaborately analyzed.¹ The distinction, which has doubtless puzzled many readers, is explained by Professor Seligman with much care, as "Clark's law, from its first formulator." Yet I have never been able to find in this law anything more than a prolonged statement of things sufficiently obvious, with no application or conclusion of serious consequence for the understanding of economic phenomena.

There are passages in Professor Seligman's book where either the reasoning is at fault or else the exposition so brief that it is impossible to make out just what the reasoning is. Sometimes, too, there is positive carelessness. A few instances will indicate the sort of criticism I feel compelled to offer on the book in this regard.

Of marginal utility it is said that, "if in the case of five apples the marginal utility of each is five units of satisfaction, that of the stock will be five times five, or twenty-five; but, if in the case of eight apples the marginal utility of each falls to three, that of the stock will be eight times three, or twenty-four. Yet the total utility of eight apples is certainly more than that of five" (p. 177). Do we apply the notion of marginal utility to a "stock," or measure total marginal utility as distinguished from total utility? Professor Seligman probably has it in mind that total exchange value is ascertained through multiplying by the number of units the value fixed by marginal utility. He seems to confound total exchange value with total utility. Incidentally, it may be noted that his conception of consumer's surplus is quite different from that of Professor Marshall, to whom he refers (p. 194).

Under the "law of joint cost"—by-products and the like—there is the following: "When domestic manufacturers get rid of a portion of their surplus output by 'dumping' it abroad at prices far lower than at home, it does not follow that the lower foreign prices make the domestic price higher than it would otherwise be. On the contrary, the foreign sales at the lower price may be the only means of keeping

¹ See his *Distribution of Wealth*, ch. xvi.

the factory going, and may thus make the domestic price lower than it would be if the producer had to charge up to his domestic goods the total expenses of unremunerative production" (pp. 252, 253). On this it is to be remarked, first, that here we have no case of joint cost or of by-products. The theory of joint cost refers to *different* commodities—say wool and mutton—produced by the same operation. "Dumping" means that different units of the *same* commodity are sold in one market cheaper than in another,—quite another phenomenon. Second, what curious reasoning is this about the effects of dumping! Does the diminution of the supply sold in the domestic market really make prices lower at home, or does it make them higher, as it is clearly meant to do? What becomes of our reasoning as to marginal utility and the familiar effect of a decrease in supply on price? And is there some immanent force which compels manufacturers to engage in "unremunerative production" and to "charge up" the expenses thereof to some persons or other?

Professor Seligman rejects the strict quantity theory of money in one passage: "Doubling the quantity of money will not result in doubling the price level: . . . the relation of quantity to value is not precisely proportional" (p. 455). Yet on the next page (456) he says that "the volume of money multiplied by the rapidity of circulation is equal to the number of transactions in cash that are effected at a given price level." The language is not careful: "the volume of money" cannot be accurately said to be equal to "the number of transactions"; but is not this precisely a statement of the quantity theory, with that qualification as to rapidity of circulation which has always been part of it? Yet, as to "fiat" money (very briefly discussed), it is said that the legal tender quality will not prevent depreciation "unless its quantity is carefully restricted *and* unless it is kept redeemable in metallic money" (p. 453). I have italicized the word "*and*," since the clause following it states, of course, the case of paper money which, being redeemable, is not of the fiat kind. Apparently, Professor

Seligman believes that paper which is really inconvertible will depreciate, however limited its quantity. But it is impossible to make out whether he does or does not accede to the strict Ricardian doctrine.

A most curious and inexplicable slip is made in the chapter on the economic history of the United States. There the recent growth of manufacturers is referred to, and it is said that "it will surprise many readers to learn that there were in 1900 six classes of manufactured products, each aggregating over half a billion dollars in value, as against one agricultural product and no mineral product" (p. 104). The figures supporting this statement (p. 105) appear on the briefest examination to be worthless, for they evidently give the gross value of manufactures, with no allowance for materials used. Thus pig iron is given under mineral products as having an output of 260 (millions), while under manufactures we have "iron and steel" as 804, with no intimation that the pig iron is one of the materials used in the manufacturing of iron and steel, not to mention coal and coke and the like. Slaughtering and meat-packing are given as 790, and men's and women's clothing as 575, again with no regard to the value of materials used. These figure as great manufactures, outranking every agricultural industry. By this sort of calculation the cotton manufacture would invariably be found a more important industry than cotton-growing, and the manufacture of flour more important than wheat-raising. In fact, "flouring and grist mill" appear in this list, with a product of 561 millions, and "bread and bakery" with a further product of 204 millions!¹

¹ I have not taken the trouble to check all of Professor Seligman's figures. The following comparison with the *Statistical Abstract* indicates the source and extent of his error for a few cases:—

	Seligman's figures.	Statist. Abstract figures.	
		Gross.	Value of materials used.
Cotton manufacture	339	339	176
Slaughtering and meat-packing	790	790	687
Lumbering	567	567	318
Foundry and machine shop	645	645	286
Flouring and grist mill	561	561	476
Boots and shoes	261	261	169

Some of the passages just considered suffer from unduly brief exposition. The book is on an encyclopedic plan, and, as a text-book, suffers from covering so much ground. Professor Seligman has tried to pack too much into it. He has left himself no chance for reasoning with his audience. Our subject offers peculiar opportunities for training people to think, and to think with care and consistency. This essential end has not been attained, I cannot but believe, in Professor Seligman's book, which, therefore, seems to me not commendable for use with students. This conclusion, and the general criticisms on the book, I offer with much regret, yet with a feeling that we economists owe it to our subject to deal frankly one with another.

F. W. TAUSSIG.

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- LECOQ (M.). Vers la journée de huit heures. Paris: Chevalier et Rivière. 1906. 16mo. 1.50 fr.
- NEUMANN (F. S.). Streikpolitik und Organisation der paritätischen Arbeitsnachweise in Deutschland. Jena: G. Fischer. 1906. 8vo. pp. 76. 2 m.
- NÖEL (C.). The Labor Party: What It Is and What It Wants. London: T. Fisher Unwin. 8vo. pp. 186. 1s. 6d.
- PETERS (W.). Zur neuesten Entwicklung des Genossenschaftswesens im Handwerk. Crefeld. W. Greven. 1906. 8vo. pp. 125. 3 m.
- SAKOLSKI (A. M.). The Finances of American Trade Unions. (J. H. U. Studies, Series 24, Nos. 3, 4.). Baltimore: Johns Hopkins Press. 1906. 8vo. pp. 152. [An excellent monograph, dealing with trade-union revenues, expenditures, and financial administration.]
- SCHULTE (Dr.). Die Entlohnungsmethoden in der Berliner Maschinenindustrie. Berlin: L. Simlon. 1906. 8vo. pp. 119. 3 m. [In the series already noted; see Bosselman in bibliography for May.]
- TUROT (M.) et BELLAMY (H.). Les habitations à bon marché. Paris: Alcan. 1906. 8vo. 6 fr.
- WRIGHT (C. D.). The Battles of Labor. Philadelphia: G. W. Jacobs & Co. 1906. 12mo. pp. 220. \$1. [The W. L. Bull Lectures for 1906. Deals with historic conflicts between labor and capital, and considers the ethical aspects of the labor problem. Of slight value.]

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- AIMES (H. H. S.). The Transition from Slave to Free Labor in Cuba. Yale Rev., May. [Describes the difficulties involved in the transition.]
- BUTLER (Amos W.). A Decade of Official Poor Relief in Indiana.

- Amer. Journ. Sociol., May. [An instructive article, with maps and bibliography.]
- CRCIL (Wm.). The Unemployable. Nat. Rev., April.
- COHN (G.). Epilog zur Generalversammlung des Vereins für Sozialpolitik in Mannheim (25-28 September, 1906). Zeitschr. f. d. ges. Staatsw., 1906, Heft 2.
- COLETTI (F.). Del costo degli scioperi per la classe lavoratrice. Riforma Soc., April.
- COURTIN. Ueber die Wirkungen der Stabilisierung von Werkstatenarbeitern. Zeitschr. f. d. ges. Staatsw., 1906, Heft 2.
- DAWSON (W. H.). The Legal Position of German Workmen. Polit. Sci. Quart., June. [A summary of the state of German law as to contract of service, protection of life, insurance, etc.]
- DES VOEUX (Wm.). Chinese Labor in the Transvaal: A Justification. Nineteenth Cent., April.
- DRAGONI (C.). La camera dei deputati e l'ispettorato del lavoro. Giorn. degli Econ., April.
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- HEISS (C.). Die Kosten der Arbeit und der Lebenshaltung der Arbeiter in den Vereinigten Staaten von Amerika. Jahrb. f. Gesetzg., 1906, Heft 2. [Based solely upon recent reports and bulletins of the Bureau of Labor.]
- . Die Arbeiterversicherung im Auslande. Krit. Blätter f. d. ges. Sozw., April. [A review and summary of the series of monographs edited by Zacher.]
- HOFFMAN (F. J.) and Others. The Improvement of Labor Conditions in the United States. Ann. Amer. Acad. Pol. & Soc. Sci., May. [Report of discussions by J. O'Connell, D. A. Hayes, Robert Hunter, H. H. Vreeland, S. B. Donnelly, G. H. Ellis, W. B. Prescott, A. B. Smith, K. Miller, Mary W. Ovington, R. R. Wright, H. M. Browne, W. L. Bulkeley, J. Bascom, E. A. Filene, Dorothy Richardson, Rose H. Phelps Stokes, Lillian D. Wald, Maud Nathan, and G. G. Huebner.]
- KATSCHEN (L.). Modern Labor Museums. Journ. Polit. Econ., April. [Chiefly on the Musée Social of Paris.]
- MACDONALD (J. R.). The Ethics of the Trade Disputes Bill. Nat. Rev., May.
- MAXWELL (H.). Why lift Trades Unions above the Law? Nineteenth Cent., May.
- MUGDAN (O.). Zur Reform der Arbeiterversicherung. II. Zeitschr. f. Socialw., April.
- MÜNSTERBERG (E.). Bericht über die 25. Jahresversammlung des Deutschen Vereins für Armenpflege und Wohltätigkeit. Jahrb. f. Gesetzg., 1906, Heft 2.
- SALUCCI (A.). Gli scioperi italiani nel 1906. Riforma Soc., April.
- SIEGFRIED (J.). Les retraites ouvrières devant le Parlement. Mus. Soc., March. [Statement of the points at issue in the debate over the old-age pension law in the French Chamber.]
- STRACHEY (St. L.). Does the Workingman contribute a Sufficient Proportion of his Income to the Revenue? Nat. Rev., April.
- VALEZ (L.). Der Kampf gegen die unfreiwillige Arbeitslosigkeit. Krit. Blätter f. d. ges. Sozw., April. [The first of a series of surveys of the recent literature on this topic, to be continued quarterly.]
- WAGNER (M.). Zur Vereinheitlichung der deutschen Arbeiterversicherung. Jahrb. f. Nat. Oek., April.
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- WOLFF (H. W.). Neglected Opportunities of Co-operation. Econ. Rev., April. [Advices co-operators to keep out of politics and

extend the sphere of voluntary co-operation.]
UNSIGNED. The Royal Poor-law

Commission of 1905, and the Condition of the Poor. Edinb. Rev., April.

III. SOCIALISM.

BAX (E. B.). *Essays in Socialism*. London: Richards. 1906. 8vo. pp. 346. 5s.

BOURGUIN (M.). *Die sozialistischen Systeme und die wirtschaftliche Entwicklung*. Autor. Uebersetzung von L. Katzenstein. Tübingen: J. C. B.-Mohr. 1906. 8vo. 8 m.

[A German translation of the Paris Professor's recent book.]

CATHREIN (V.). *Der Sozialismus, seine Grundlagen, seine Durchführbarkeit*. 9te vermehrte Auflage. Freiburg: Herder. 1906. 8vo. pp. 454. 3.60 m.

[The first edition of this work by the well-known Jesuit appeared in 1890, the eighth in 1903.]

JAURES (Jean). *Studies in Socialism*. Trans. by Miss Mildred Min-turn. New York: Putnam's.

[Very useful to students of French socialistic thought.]

SALEEBY (C. W.) *Individualism and*

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SPARCO (J.). *Socialism*. New York: Macmillan. 1906. 12mo. pp. 257.

[Probably the best presentation of socialistic theories for the American student.]

VANDERVELDE (E.). *Le socialisme et l'agriculture*. Paris: Giard et Brière. 1906. 8vo. 2 fr.

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KÖHLER (J.). *Die Sozialdemokratie auf dem Lande in Ungarn und Deutschland*. Zeitschr. f. Socialw., May. [Summarizes a recent study by Graf Malláth, a great Hungarian land-owner.]

THOMPSON (J. M.). *The Claims of Socialism*. Econ. Rev., April. [Needlessly paradoxical because the author avoids definite issues.]

IV. LAND AND AGRARIAN PROBLEMS.

BLIN (H.). *Vente et débouchés des produits de la ferme*. Paris: Savy. 1906. 18mo. pp. 304. 2 fr.

CONSTANTIN (J.). *Le transformisme appliqué à l'agriculture*. Paris: Alcan. 1906. 8vo. 6 fr.

CRONER (J.). *Der Grundbesitzwechsel in Berlin, 1895-1904. Eine statistische Studie*. Berlin: G. Reimer. 1906. 8vo. pp. 97. 1.50 m.

[Prepared by the secretary of the Aeltesten der Kaufmannschaft, from statistics gathered for that body.]

LECAPENTIER (G.). *La question agraire d'Écosse et les crofters*. Paris: Rousseau. 1906. 8vo. pp. 84. 2.50 fr.

LEONHARD (R.). *Kornhäuser wie Getreidehandel. Ein Beitrag zur deutschen Agrarpolitik*. Munich:

E. Reinhard. 1906. 8vo. pp. 205. 4 m.

PRATT (E. A.). *Transition in Agriculture*. London: J. Murray. 1906. 8vo. pp. 364. 5s.

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BROZZI (U.). *Sui salari agricoli nel Pavese*. Giorn. degli Econ., April.

CAMMARILE (A.). *Travaux et projets d'irrigation dans l'ancien continent*. Rev. Econ. Intern., May. [Irrigation in Asiatic countries.]

CHESSA (F.). *Le condizioni economiche e sociali dei contadini dell'agro di Sassari* (concluding article). Riforma Soc., April.

HAHN (E.). *Die primitive Landwirtschaft, III. and IV.* Zeitschr. f. Socialw., April, May.

HOOK (A.). *The Problem of the*

Unearned Increment. *Econ. Rev.*, April. [Discusses the problem from the point of view of the constructive legislator intent upon reform.]

KIESERITZKY (E.). Baustellenpreise und Hausflächenwerte. *Jahrb. f. Nat. Oek.*, April.

PETRY (J.). Der Niedergang der Hamberga- oder Waldfeldwirtschaft. *Jahrb. f. Nat. Oek.*, March.

WINFREY (R.). The Progress of the Small Holdings Movement. *Econ. Journ.*, June. [Narrates some promising experiments.]

V. POPULATION AND MIGRATION.

CONTENTO (A.). La popolazione veneziana dopo il 1871. Comparata con quella delle maggiori città italiane. Venezia, 1906. 8vo. pp. 137.

CORRIDORE (F.). La popolazione dello Stato romano (1656-1901). Rome: E. Loescher. 1906. 8vo. pp. 287. 5 l.

MACQUART (E.). Les mouvements de la population et de la richesse

privée de la France. Nancy: Berger-Levrault. 1906. 8vo.

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VI. TRANSPORTATION.

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[A convenient treatise; serviceable as a text-book and work of reference. Treats of ocean transportation fully; of inland water transportation more briefly.]

PARSONS (F.). The Railways, the Trusts, and the People. Part I. Philadelphia: Pubs. of the Equity Series.

[Deals with the political and the economic relations of railways. Argues that public control has failed. The forthcoming second part will set forth the argument in favor of public ownership.]

PENSA (H.). La République et le canal de Panama. Paris: Hachette. 1906. 8vo. 7.50 fr.

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BARKER (J. E.). The Shipbuilding and Shipping Industries of Germany. *Contemp. Rev.*, March.

MEYER (H. R.). A Reply to Professor B. H. Meyer, Councillor Leyen, Professor W. Fischer. *Journ. Polit. Econ.*, April. [A vigorous reply, covering many points of detail, to criticisms of the author's book on Government Regulation of Railway Rates.]

SCHWABE. Ueber die Betriebsmittelgemeinschaft der deutschen Eisenbahnen. *Jahrb. f. Gesetzg.*, 1906, Heft 2.

THAMER (C.). Deutschlands Getreideernte im Jahre 1904 und die Eisenbahnen. *Archiv für Eisenbahnw.*, 1906, Heft 3. [Presents elaborate traffic statistics.]

THOMAS (H.). Les cables sous-marins. *Rev. Econ. Intern.*, May. [History of the cables, and examination of their tariffs.]

UNSIGNED. Die Eisenbahnen der Erde. *Archiv für Eisenbahnw.*, 1906, Heft 3. [Comprehensive statistical survey.]

— Die Eisenbahnen in Australien. *Archiv für Eisenbahnw.*, 1906, Heft 3. [Statistical results for 1903 and 1904.]

VII. FOREIGN TRADE AND COLONIZATION.

- CHURCHILL (W. S.). For Free Trade. London: Humphries. 1906. 8vo. pp. 136. 1s.
- CUNNINGHAM (W.). Wisdom of the Wise: Three Lectures on Free Trade Imperialism. Cambridge: Univ. Press. 1906. 8vo. pp. 134. 2s.
- FANNO (M.). L'espansione commerciale e coloniale degli stati moderni. Turin: Bocca. 1906. 8vo. pp. 514. 12 fr.
- [An elaborate systematic treatise. Parts I. and II. give a history of colonization by Great Britain, Holland, France, Germany, United States, Japan. Part III. gives a theory of the causes of colonization, for which three historical stages are analyzed.]
- GAFFAREL (P.). Histoire de l'expansion coloniale de la France depuis 1870 jusqu'en 1908. Paris: Challamel. 1906. 8vo. 8.50 fr.
- GIRBAL (P.) and Others. Les colonies françaises au début du XX^e siècle. Cinq ans de progrès, 1900-1905. Paris: Challamel. 1906. 8vo. 9 fr.
- MASSON (P.). Marseille et la colonisation française: essai d'histoire coloniale. Paris: Challamel. 1906. 8vo. 12 fr.
- ROOT (J. W.). Colonial Tariffs. Liverpool: J. W. Root. 1906. 8vo. pp. 312. 7s. 6d.
- [Gives account of the tariffs of British and other colonial dependencies.]
- ROUGET (F.). L'expansion coloniale au Congo français. Paris: Larose. 1906. 8vo. pp. 942. 10 fr.
- TREILLE (G.). Organisation sanitaire des colonies. Progrès réalisés, progrès à faire. Paris: Challamel. 1906. 8vo. 3 fr.
- In Periodicals.*
- ANTON (G. K.). Studien zur Kolonialpolitik der Niederlande. I. Die Rohrzuckerindustrie auf Java und die Eingeborenen. Jahrb. f. Gesetzg., 1906, Heft 2.
- . Zur Handelsbilanz der niederländischen Ostindien. Jahrb. f. Nat. Oek., May. [Gives commercial statistics of the Dutch East-India colonies.]
- GIRETTI (E.). La protection et le progrès industriel de l'Italie. Journ. des Écon., May. [Attempts to show statistically how Italy's development has been retarded by the tariff of 1887.]
- PRICE (L. L.). The Fiscal Question: Retrospect and Prospect. Econ. Rev., April. [More in the way of retrospect than prospect.]
- SMITH (J. Russell). Ocean Freight Rates. Pol. Sci. Quart., June. [A valuable article, describing the conditions of ocean transportation, the factors bearing on rates, and the attempts, usually futile, to fix rates by agreements or combinations.]
- STERNEGG (C. T. von I.). Les présents aspects du développement de l'économie mondiale. Rev. Écon. Intern., April. [Examines the influence of Japan upon the trade policies of other countries.]
- TAYLOR (N. M.). Free Trade and Protectionism. Westm. Rev., May.
- UNSIGNED. Protection and the Working Classes. Edinb. Rev., Jan.

VIII. MONEY, BANKING AND EXCHANGE.

- EICHHOLTZ (Th.). Nationale deutsche Bankpolitik unter bes. Berücks. der deutschen Uebersee- und Kolonialbanken. Berlin: W. Süsserott. 1906. 8vo. pp. 177. 7 m.
- FAVRE (J.). Les changes dépréciés. Études sur la situation monétaire de l'Espagne, le Mexique, la République Argentine, le Maroc, la Chine, etc. Paris: Chevalier et Rivière. 1906. 16mo. 3.30 fr.
- HUGENBERG (A.). Bank- und Kreditwirtschaft des deutschen Mittelstandes. Munich: J. F. Lehmann. 1906. 8vo. pp. 121. 3 m.

- RIESER.** Zur Entwicklungsgeschichte der deutschen Grossbanken in bes. Rücks. auf die Konzentrationsbestrebungen. 2 vermehrte Auflage. Jena: G. Fischer. 8vo. pp. 387. 7 m.
[The first edition was published in 1905.]
- ROESLE (A.).** Die Entwicklung der schweizerischen Kreditanstalt in Zürich. Zürich: Rascher & Co. 8vo. pp. 228. 2.80 m.
[In Zürcher Volksw. Studien.]
- SMITH (C. W.).** International Gambling in Futures the Economic Ruin of the World. London: King. 1906. 8vo. pp. 354. 5s.
- In Periodicals.*
- CANOVAI (T.).** La statistica internazionale delle fluttuazioni degli incassi e del portafoglio delle banche. Giorn. degli Econ., March.
- LEWANDOWSKI (M.).** Le marché de Paris. Rev. Econ. Intern., May. [The writer, a director of the Comptoir National d'Escompte, describes the organization and resources of Paris as a financial centre.]
- LOTZ (W.).** G. F. Knapps neue Geldtheorie, I. Jahrb. f. Gesetzg., 1906, Heft 2.
- NUSBAUM (A.).** Zur neueren Entwicklung des deutschen Bankwesens. Zeitschr. f. Socialw., May. [A survey of recent literature.]
- ROSENDORFF (R.).** Zur neuesten Entwicklung des deutschen Auslandsbankwesens. Jahrb. f. Gesetzg., 1906, Heft 2.
- . Treuhandgesellschaften und ihre Funktionen. Jahrb. f. Nat. Oek., May. [On trust companies in Germany.]
- ROZENROOD (A.).** Le marché de Londres. Rev. Econ. Intern., April.
- TAUSSIG (F. W.).** Reform in Currency and Banking, with Special Reference to Crises. American Banker, May 12, 1906. [An address delivered before the Savings Bank Association of the State of New York.]
- VOIGT (A.).** Die staatliche Theorie des Geldes. Zeitschr. f. d. ges. Staatsw., 1906, Heft 2. [A criticism of G. F. Knapp's recent book.]

IX. FINANCE AND TAXATION.

- ARMITAGE-SMITH (G.).** Principles and Methods of Taxation. London: J. Murray. 1906. 8vo. pp. 204. 5s.
- BREES (E.).** Les régies et les concessions communales en Belgique. Paris: Giard et Brière. 1906. 8vo. 12 fr.
- BRUNHUBER (R.).** Die Wertschulungssteuer. Zur Praxis und Theorie. Jena: G. Fischer. 1906. 8vo. pp. 121. 2 m.
- COULON (E.).** Tarif pratique des droits de douane et de statistique. 2^{me} édition mise à jour. Paris: Challamel. 1906. 8vo. 6 fr.
- ***FOX (A. Wilson).** Notes on the Proposals to levy Rates in Respect of Site Values. London: P. S. King. 1906. 8vo. pp. 124. 3s. 6d.
[A summary, by the secretary of the Royal Commission on Local Taxation, of the results on this topic.]
- HATTORI (B.).** Local Finance in Japan in Relation to Imperial Finance. Princeton: Princeton Press. 1906. 8vo. pp. 90.
- KIMMICH (K.).** Die Ursachen der niedrigen Kursstandes deutscher Staatsanleihen. Eine Untersuchung über engl., franz., und deutschen Staatskredit. Stuttgart: Cotta. 1906. 8vo. pp. 369. 8 m.
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- KONSTAM.** Rates and Taxes. London: Butterworth. 1906. 8vo. 5s.
- LANGE (M. E.).** Local Taxation in London. London: King. 1906. 8vo. pp. 58. 1s.
- LANWICK (M.).** Les finances de la Russie et la crise actuelle. Paris: Giard et Brière. 1906. 8vo. 60 c.

MERLE (L.). *La justice dans l'impôt et l'impôt sur le revenu en France*. Paris: Pedone. 1906. 8vo.

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ROWNTREE (J.) and SHERWELL (A.). *Taxation of the Liquor Trade*. Vol. I. London: Macmillan. 1906. 8vo. pp. 580. 10s. 6d.

[An important investigation, both from the financial and the social points of view. The first important work in English upon the subject.]

UNDESIGNED. *Conto dell'amministrazione delle finanze del regno d'Italia nell'anno 1813 e budget per l'anno 1814* (con prefazione di Silvio Pellini). Aosta. 1906. 4to. pp. 70.

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BELL (W. T.). Should the Death Duties be increased? *Westm. Rev.*, April.

COHN (G.). On Some Unsettled Questions of Public Credit. *Econ. Journ.*, June. [Describes, but does not attempt to explain, the difference in return to the investor among the obligations of European countries.]

FANNO (M.). Della ripercussione dei dazi variabili. *Giorn. degli Econ.*, April.

GAUTIER (L.). La proportionnalité de l'impôt des patentes et la loi de 1898. *Rev. de Sci. et de Leg. Fin.*, IV., 1.

KATZENSTEIN (L.). Die Reichsfinanzreform. *Ann. des Deutsch. Reichs*, 1906, 3. [Advocates abolition of matricular contributions and reform of duties on liquor and tobacco, as well as an imperial inheritance tax.]

TIVARONI (I.). Le imposte di famiglia e di valore locativo secondo la teoria e il diritto positivo. *Giorn. degli Econ.*, April.

X. CAPITAL AND ITS ORGANIZATION: COMBINATIONS.

FARRAGGIANA (G.). *La municipalizzazione dei pubblici servizi: studio economico-sociale, con commento alla legge 29 marzo 1903, no. 103*. Turin: S. Lattes e C. 1906. 16mo. pp. 325. 3 l.

LINDEMANN (H.). *Städteverwaltung und Municipal-Sozialismus in England*. 2 Auflage. Stuttgart: Dietz. 1906. pp. 316. 2 m.

[This new edition seems to be unchanged except for a new preface.]

MOODY, (J.). *The Art of Wall Street Investing*. New York: The Moody Corporation. 1906. 12mo. pp. 167. \$1.

[Of interest to students as well as investors.]

———. *Moody's Classified Investments*. New York: The Moody Corporation. 1906. \$10.

Q. F. *How to buy Life Insurance*. New York: Doubleday, Page & Co. 1906.

SHADWELL (A.). *Industrial Efficiency*. New York: Longmans, Green & Co. 1906. 8vo. \$7.

[A valuable comparative study of England, Germany, and the United States.]

UNITED STATES (official). *Report of the Commissioner of Corporations on the Transportation of Petroleum*. Washington: Government Printing Office. 1906. 8vo. pp. 512.

[Presents evidence of favoritism by the railroads to the Standard Oil Company.]

UNDESIGNED (official). *Denkschrift über das Kartellwesen*. Bearbeitet im Reichsamt des Inneren. Theil 1, 2. Berlin: C. Heymann. 1906-1906. 4to. 2.50 m.

[Part 1, the most important in this set of documents, is out of print and difficult to procure. Part 2, on some legal questions, is to be had.]

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- BROOKS (R. C.).** The Municipal Gas Works of Berlin, II. *Yale Rev.*, May. [Commendatory on the whole.]
- BULLOCK (C. J.).** Life Insurance and Speculation. *Atlantic Monthly*, May.
- BURDETT (E. W.).** Municipal Ownership in Great Britain. *Journ. Polit. Econ.*, May. [An elaborate paper by attorney for electric lighting company, who examines the situation most fully as to electric lighting and telephone, and finds the financial and economic results unsatisfactory.]
- COCKERELL (T. D. A.).** Municipal Activity in Britain. *Amer. Journ. Sociol.*, May. [Written with a strong socialist bias.]
- GROSSCUP (F.).** Shall our Corporation Policy be Reformed, or shall

the Corporation be Destroyed? *Internation*, April.

- LESCURE (J.).** L'évolution du cartell dans la grande industrie allemande de la houille et du fer. *Rev. d'Econ. Pol.*, May. [A brief summary of recent studies.]
- NEWCOMB (H. T.).** A Conservative Trust Policy. *Moody's Mg.*, June. [The policy consists in perfecting our corporation laws, since a "trust" is now nothing more than a large corporation.]
- PAPE (E.).** Der deutsche Braunkohlenhandel unter dem Einfluss der Kartelle. *Zeitschr. f. d. ges. Staatsw.*, 1906, Heft 2.
- PLATE (A.).** Munizipalsozialismus und städtisches Anleihewesen in England. *Jahrb. f. Gesetzg.*, 1906, Heft 2.
- ROFF (Russell).** Municipal Ownership: A Point Ignored. *Internation*, April.

XI. ECONOMIC HISTORY.

- AFTALION (A.).** Le développement de la fabrique et le travail à domicile dans les industries de l'habillement. Paris: Larose et Tenin. 1906. 12mo. 3.50 fr.
- BARSOTTI (E.).** Sulle origini del l'arte della seta in Lucca. *Lucca*. 1906. 8vo. pp. 17.
- BLOCH (C.).** Collection de documents inédits sur l'histoire économique de la Révolution française. Département du Lotret. Paris: Leroux. 1906. 8vo. 10 fr. [Cahier des doléances du bailliage d'Orléans pour les états généraux de 1789.]
- BOISSONADE (P.).** Les études relatives à l'histoire économique de la Révolution française, 1789-1804. Paris: Cerf. 1906. 8vo. pp. 168. 5 fr. [A bibliography of the industry, agriculture, and commerce of the period.]
- BONN (M. J.).** Die englische Kolonisation in Ireland. Stuttgart: Cotta. 1906. 8vo. 2 vols. pp. 408, 324. 18 m. [An elaborate investigation, based on the sources, covering English colonization from Anglo-Norman times to the middle of

the 19th century. The recent period is touched cursorily, the author having treated it more fully in recent articles in the *Archiv f. Sozialwissenschaft*.]

- BOTHE (Fr.).** Beiträge zur Wirtschafts- und Sozialgeschichte der Reichsstadt Frankfurt. Leipzig: Duncker & Humblot. 1906. 8vo. pp. 181. 4.60 m.
- CHARLÉTY (S.).** Collection de documents inédits sur l'histoire économique de la Révolution française. Département du Rhone. Paris: Leroux. 1906. 8vo. 16 fr. [Published under the direction of the French ministry of public instruction. The documents relate to the sale of national property.]
- EHRENBERG (R.).** Die Unternehmungen der Brüder Siemens. Band I.: bis 1870. Jena: G. Fischer. 1906. 8vo. pp. 545, 7 charts. 12 m. [An account of the Siemens enterprises, based largely on letters between the brothers and the accounts of the firms. An interesting contribution to economic history.]
- GEBAUER (M.).** Breslau's kommu-

nale Wirtschaft um die Wende des 18. Jahrhunderts. Ein Beitrag zur Städtegeschichte. Jena: G. Fischer. 1906. 8vo. 9 m.

[The author is professor at the Academy of Posen.]

HAUSER (H.). *Ouvriers du temps passé (XV^e et XVI^e siècles)*. Paris: Alcan. 1906. 8vo.

KARMIN (O.). *La legge del catasto fiorentino del 1427: testo, introduzione, e note*. Florence: B. Seeber. 1906. 8vo. pp. 79. 3 l.

SALVIONI (G. B.). *Il valore della lira bolognese nella prima metà del secolo XVI: studio*. Bologna: N. Zanichelli. 1906. 8vo. pp. 114.

Le capitalisme dans le monde antique. *Études sur l'histoire de l'économie romaine*. (Traduit sur le manuscrit italien par Alfred Bonnet.) Paris: V. Giard & E. Brière. 1906. 8vo. pp. 321. 7 fr.

[An interesting study. Holds that nothing comparable to modern capitalism is found in classical antiquity.]

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